Saskatchewan

Rate Review Panel

Report to the Minister of Crown Investments Corporation on:

The Proposal from SaskPower for Changes in Electrical Rates

December 6, 2001

102-02305/

Table of Contents

Introduction ..... Page 1

Proposal by SaskPower ..... Page 3

The Review Process ..... Page 9

Panel Conclusions and Recommendations ..... Page 13

Summary of Recommendations ..... Page 19

Appendix A: Minister's Orders - Saskatchewan Rate Review Panel
SaskPower Rate Change

Appendix B: Dillon Consulting Limited Independent Review of the
SaskPower Rate Proposal of October 2001

Introduction

The Saskatchewan Rate Review Panel (the "Panel") was asked by the Government of Saskatchewan to review Crown corporations' requests for monopoly rate changes.

The Panel consists of Bob Lacoursiere (Chair), Jack Boan (Vice Chair), Tracey Bakkeli, Jo-Ann Carignan-Vallee, Sheldon Craig and Joan Meyer. Each member of the Panel has been appointed until July 25, 2002.

MANDATE

In its general mandate, the Panel is instructed to conduct reviews and provide opinions on the fairness and reasonableness of proposed Crown corporation rate changes referred by the Minister of Crown Investments Corporation, considering the interests of the customer, the corporation and the public.

In conducting its reviews, the Panel is required to:

- receive a rate change submission from a Crown corporation;
- establish procedures for conducting the review and ensure that these procedures are made available to the public;
- engage the services of a consultant(s) to assist the Panel in its review of the fairness and reasonableness of the proposed rate change;
- make available to the public, prior to holding public meetings, the Crown corporation rate change submission, with the exception of commercially sensitive information;
- hold public meetings and provide appropriate notification to the public of the date and location of public meetings, including any rules for public participation and Crown corporation participation;
- provide members of the public with the opportunity to review and comment on the proposed rate changes to the extent reasonably allowed by the mandate of the Panel and by the schedule according to which the Panel is required to complete its work and provide its report to the Minister of Crown Investments Corporation;
- receive presentations of the consultant(s) or the Crown corporation, review any written submissions and receive comments from the public;
- prepare a report on the Crown corporation rate change submission for the Minister of Crown Investments Corporation after considering the material received from the Crown corporation, the consultant(s), the public and its own analysis:
    - where the Panel determines the rate changes as proposed are fair and reasonable, recommend that the changes be implemented; or,
    - where the Panel determines the rate changes are not fair and reasonable as proposed, recommend that the rate changes be adjusted providing reasons for this conclusion;

- provide its report respecting the proposed rate changes to the Minister of Crown Investments Corporation on a date set out in or within any time period after having received the rate change submission that is contained in the specific terms of reference for particular Crown corporation rate reviews; and,
- make its report available to the public.

TERMS OF REFERENCE

On October 11, 2001, the Panel was instructed to conduct a review of the SaskPower proposal for changes in electrical rates effective December 1, 2001.

With respect to the proposal, the Panel was instructed to consider the fairness and reasonableness of the proposed changes considering:

- SaskPower's anticipated cost for fuel (natural gas and coal);
- SaskPower's anticipated hydro facilities availability;
- SaskPower's load forecasts;
- SaskPower's planned maintenance program;
- SaskPower's operating, administrative and maintenance expenses;
- SaskPower's depreciation and finance expenses;
- SaskPower's Corporate Capital Tax; and,
- the revenue requirement resulting from the delivery cost of service.

In reviewing the proposal, the Panel was instructed to take as given:

- the current rate structure (ie. components and classifications);
- the budgeted capital allocation, the rate base, and established corporate policies;
- the Return on Equity target of 10 percent;
- the non-capital spending levels as defined above;
- the existing service levels;
- any existing supply contract;
- the revenue to revenue requirement ratio target range of 0.95 and 1.05 to be achieved by 2004; and,
- the cost of service methodology, which allocates SaskPower's costs between the various rate classes.

The Panel was instructed to include in its report an explanation of how, in its opinion, implementation of the Panel's rate recommendations will allow SaskPower to achieve the performance inherent in the parameters outlined above, where the Panel's recommendations are different from SaskPower's proposed rate changes.

The Panel was instructed to present its report to the Minister of Crown Investments Corporation by December 7, 2001 **(see Appendix A)**.

Proposal by SaskPower - Electrical Rates

SaskPower proposed a set of rate changes to generate an overall 5.4 percent revenue increase (6.8 percent excluding long term contracts) effective December 1, 2001. This increase should generate approximately $4.7 million and $56 million in incremental revenue in 2001 and 2002, respectively.

The proposal includes rate changes for all customer classes. SaskPower also proposed the continuation of its rate rebalancing and redesign initiative that started with the rate package approved effective April 1, 2001.

The following table summarizes the major components of SaskPower's rate application, on average, for each customer class.

Customer Class	Requested Increase (Average % Increase)	Current R/RR Ratio* 2002	Proposed R/RR Ratio 2002
Urban Residential	7.1	0.97	0.98
Rural Residential	10.0	0.90	0.94
Farm	8.0	0.96	0.98
Urban Small Commercial	5.0	1.02	1.01
Rural Small commercial	8.0	0.95	0.97
Urban General Service	5.0	1.03	1.03
Rural General Service	6.0	1.01	1.01
Small Manufacturing	12.0	0.82	0.86
Large Manufacturing	12.0	0.83	0.89
Power Rate	4.0	1.04	1.03
Power Rate Contract	0.9	1.01	0.98
Oilfield	4.0	1.13	1.11
Streetlight	4.0	1.12	1.11
Reseller	10.0	0.95	1.00
System Average	5.4	1.00	1.00
System Average without Contracts	6.8	-	-

* R/RR: Revenue to Revenue Requirement ratio

Note: The SaskPower proposal allows a maximum increase for any individual customer of 10 percent above the proposed class average increase. For example, an individual manufacturing customer could have a rate increase of 22 percent (12.0 + 10.0 percent).

REQUEST HIGHLIGHTS

The application consists of three major elements:

1. an increase in revenues to offset fuel and purchased power expenses;
2. a requirement to rebalance rates to improve equity between rate classes and revenues that cover the cost of service; and
3. a rate design adjustment to improve consistency and equity among the components.

A key aspect of rate design is that the cost components are allocated to each customer group in a fair and reasonable manner. That is, each customer class should reflect the share of costs that accurately reflect the cost of providing service to that customer class. Customer classes are based on location (rural or urban), type of customer and consumption attributes. Customer classes are also divided into subcategories, each with a designated rate code.

Rates are composed of three components:

- Basic Monthly Charge;
- Energy Charge; and
- Demand Charge.

The actual charges for specific customer classes will vary with their usage, demand fluctuations and applicable rate codes. The application includes changes to all three components with the goal of bringing into alignment the charges for each cost element for each rate component for each customer class.

Basic Monthly Charge

This component covers certain fixed costs associated with the delivery of service to a customer regardless of the amount of electricity used. These costs include meter reading, billing, customer service, marketing and a component of low voltage lines and associated transformers. The Basic Monthly charge represents the minimum charge for a customer hookup to the system.

Energy Charge

This element covers the costs associated with generating electricity and consists primarily of fuel costs (ie coal, natural gas and water rental). The Energy Charge also includes the cost of providing the energy load as well as any losses due to moving the energy from the generating stations to the point of use.

Demand Charge

This relates to the costs associated with meeting peak load requirements for a given customer class. It consists of much of the generation and all of the transmission infrastructure as well as the operating and maintenance expenses. The Demand Charge also includes most of the distribution infrastructure and associated operating and maintenance costs.

For example, for residential customers, SaskPower proposed to increase the basic monthly charge in cities, towns, villages and urban resorts by $0.61 per month from the current rate of $12.57 to $13.18 per month. At the same time, SaskPower proposed to increase the basic rate for rural residences, rural resorts and those receiving electricity generated from diesel generators by $3.05 per month from $15.41 to $18.46 per month.

For all residential customers, the energy consumption rate would be increased from 7.36 cents/kWh to 7.93 cents/kWh. Residential customers do not have a demand charge component to their bills.

Rate Rebalancing

One fundamental concept of rate rebalancing is an attempt to charge customers more accurately for the actual costs associated with providing that customer electricity. The industry measures this by setting a 'revenue to revenue requirement ratio' (R/RR). Ideally this should have a value of 1.00. This would mean that the revenue gained from the customer class covers all the costs of service for that class.

Simply put, with a R/RR of 1.00, for every $1.00 of costs, the company would receive $1.00 in revenue. If a customer is only paying 0.90 the full cost of supplying electrical service is not being recovered. Conversely, if a customer has a R/RR of 1.10, the customer is paying more than their fair share of costs and is subsidizing other customers.

Because it is difficult to maintain a R/RR exactly at 1.00, most jurisdictions use a R/RR range of 0.95 to 1.05. SaskPower proposes to reach this range over a four-year period, ie by 2004.

If the proposal is approved as presented, only rural residential and manufacturing classes will be below the range and only oilfield and streetlight customer classes will be above the target range.

SaskPower states without rate rebalancing, cross subsidization will continue. This is sustainable only if the customer base remains captive to the utility because of technology or legislation. Given recent industry trends across North America, the concept of jurisdictional monopoly is eroding. In order to retain customer classes, SaskPower must reduce cross-subsidization both among classes and within rate classes.

ISSUES

SaskPower identified the following issues related to its proposal.

Municipalities

SaskPower levies and collects a surcharge on behalf of certain, primarily urban, municipalities. This is a historical obligation and is collected by SaskPower subject to the request of the municipality.

The municipal surcharge is up to 10 percent for cities and up to 5 percent for towns and villages. It is applied to all appropriate customer bills and all eligible municipalities collect the surcharge.

When cost of the increase (est. $1.3 million) is combined with changes to the municipal surcharge and grants in lieu of taxes totaling $2.3 million, SaskPower indicates municipalities will realize a net revenue increase of approximately $1.0 million.

Public Facilities

This sub-category is contained within both urban and rural small commercial customer classes. Public facility rates apply to schools, hospitals, nursing homes, skating and curling rinks, and recreational facilities. The average increase ranges from 5.0 percent to 9.9 percent depending on location and facility size.

Resellers – Saskatoon and Swift Current

A reseller is a wholesale customer who receives power in bulk from SaskPower and then distributes it via its own system to final consumers, either residential or commercial. Both Saskatoon and Swift Current would be subject to a 10 percent increase.

Effective November 1, 2001, the Open Access Transmission Tariff (OATT) was introduced allowing both cities to seek other suppliers if they choose. SaskPower wishes to remain the supplier of choice by offering a reliable supply at a competitive price. Because the R/RR ratio for this group has been significantly impacted by increased fuel costs, the proposed increase is larger than the system average to realign the ratio at an acceptable level of 1.00.

Manufacturing

The manufacturing classes, regardless of location, are the most heavily subsidized within the system, with R/RR ratios of 0.82 for small customers and 0.83 for large customers. As a consequence SaskPower is proposing a rate increase of 12 percent. This is significantly more than the system-wide average increase of 5.4 percent. However an increase of this magnitude is required to reach the four-year rate-rebalancing goal.

Power Rates

This class contains two components: published and contract. The escalation clauses in existing contracts have not kept up with the increases in fuel costs. As a consequence, the R/RR for this customer group will fall from 1.01 to 0.98 after the rate increase. As contracts lapse, SaskPower plans to move these customers to published rates until fuel costs stabilize.

Implications of Deferral

SaskPower believes that deferring the rate increase will promote a decline in the company's financial health. Failure to fund adequately and maintain the established electrical system will place the costs of system failure and repair onto future users.

Insufficient revenues to fund required capital improvements, operating expenses and maintenance can be managed by either postponing investment and accepting the inevitable decline in capabilities or by borrowing with increased debt and interest costs with commensurate pressure to increase rates.

Each month the rate increase is deferred represents a loss of approximately $4.7 million in revenue to the corporation.

IMPACT ON CUSTOMERS

The table on the following page illustrates the average effect on customers in each classification

Customer Class Impact

Class of Service	Current Average Monthly Rate ($)	SaskPower Proposed Average Monthly Rate ($)	Average Increase ($/month)	Average Increase** %	Minimum Increase %	Maximum Increase*** %
Urban Residential	58	62	4	7.1	4.9	7.7
Rural Residential	88	97	9	10.0	8.0	19.8
Total Residential	**62**	**67**	**5**	**7.5**	-	-
Farms	134	145	11	8.0	0.0	18.0
Small Commercial – Urban	194	204	10	5.0	-15.5	13.1
Small Commercial - Rural	183	198	15	8.0	8.0	15.3
Total Small Commercial	**192**	**203**	**11**	**5.5**	-	-
General Service – Urban	1,307	1,372	65	5.0	5.0	6.1
General Service – Rural	860	912	52	6.0	6.0	7.0
Total General Service	**1,161**	**1,222**	**61**	**5.2**	-	-
Small Manufacturing	1,883	2,109	226	12.0	-7.1	21.9
Large manufacturing	95,060	106,467	11,407	12.0	4.5	19.2
Power (Published)	164,647	171,233	6,586	4.0	-	-
Power (Contract*)	351,975	355,086	3,111	0.9	-	-
Oilfields	954	992	38	4.0	-1.7	13.9
Streetlights	397	413	16	4.0	-	-
Reseller	2,330,746	2,563,821	233,075	10.0	-	-
Total (System)	-	-	-	**5.4**	-	-
Total System (excluding Contracts)	-	-	-	**6.8**	-	-

* Contract sales are excluded from this review and rates are established through negotiation.

** Differences due to rounding.

***The SaskPower proposal allows a maximum increase for any individual customer of 10 percent above the proposed class average increase. For example, an individual manufacturing customer could have a rate increase of 22 percent (12.0 + 10.0 percent).

EFFECTIVE DATE

SaskPower proposes these increases come into effect December 1, 2001

The Review Process

PUBLIC CONSULTATIONS

In reviewing the SaskPower proposal, the Panel received comments and suggestions from individuals and groups throughout Saskatchewan through a public consultation process that included:

- eight public meetings;
- use of a toll-free telephone message line;
- receipt of submissions by mail;
- receipt of messages by facsimile; and,
- receipt of electronic message correspondence.

These methods of public discussion were advertised in daily newspapers and in weekly newspapers. In addition, radio clips were played on local radio stations.

Panel members were also involved in numerous media interviews and public appearances.

Copies of the SaskPower rate proposal were available to the public at SaskPower offices, at the public meetings and on the Internet.

Public meetings were held on:

- October 29 in Swift Current;
- October 30 in Moose Jaw;
- October 31 in Regina;
- November 1 in Yorkton;
- November 5 in North Battleford;
- November 6 in Prince Albert
- November 7 in Melfort; and
- November 15 in Saskatoon.

The public meetings included:

- an introduction by the Panel Chair with an explanation of the proceedings and the Panel's mandate for the review;
- an overview by SaskPower of its request;
- an opportunity for submissions by individuals or organizations that had indicated an interest in addressing the Panel; and,
- an opportunity for questions or comments from the floor.

SUBMISSIONS

The Panel received formal submissions from the following organizations:

- City of Swift Current,
- City of Regina,
- Canadian Association of Petroleum Producers,
- Small Explorers and Producers Association of Canada (SEPAC),
- Cameco Corporation and COGEMA Resources Inc.,
- Saskatchewan Wheat Pool,
- Mr. Brian Clavier,
- Saskatchewan Chamber of Commerce,
- Saskatoon and District Chamber of Commerce, and
- Saskatchewan Recreation Facilities Association.

The Panel also received a number of submissions and comments from individuals and organizations at public meetings, via telephone, fax and emails.

PRESENTATIONS

The Panel received presentations from officials of SaskPower and from the Panel's consultant to:

- develop an understanding of the proposed rate changes;
- understand the analyses prepared for the Panel; and,
- develop its recommendations.

CONSULTANT

In conducting its review, the Panel engaged the services of a consultant to examine and advise on the reasonableness and fairness of the SaskPower proposal.

Dillon Consulting Limited was contracted to provide consulting services to the Panel. Staff assigned to the review have extensive experience in utilities regulation and have served as consultants to a variety of regulatory and industry bodies in Canada and internationally.

The Panel met with the consultant and subsequently sought additional information from SaskPower on the rate proposal.

The consultant prepared a report and assessment of the SaskPower proposal **(attached as Appendix B)**.

CONSULTANT'S REPORT – HIGHLIGHTS

The Panel reviewed the consultant's findings in detail and particularly noted the following:

- **Overall Requirement** – If SaskPower's assumptions are accepted as presented, the request for incremental revenue of $56 million for 2002 is reasonable. However, a number of assumptions are subject to challenge as noted below. The consultant further noted that these results are **not strictly additive**.

- **Load Growth Forecast** - SaskPower's load growth forecast of 3.1 percent appears to be optimistic. Given economic trends particularly subsequent to September 11, 2001, the consultant suggested a more realistic rate would be in the range of 1.0 to 1.5 percent, for a potential $8 to10 million reduction in revenue requirements.

- **Natural Gas Pricing** - Recent declines in natural gas prices suggest that SaskPower's actual 2002 gas costs may be as much as 1 cent per KiloWatt hour (KWhr) lower, for a revenue requirement reduction of up to $15 million.

- **Hydro Power Availability** – A positive change in stream flow forecasts and water supply outlook could reduce the revenue requirement by up to $14 million. Conversely, a drier than predicted year will increase the need for gas-fueled generation and create incremental costs of up to $14 to 19 million.

- **Import Power** – The consultant suggests, based on the current economic situation, a more positive view of potential import power costs should be considered. For example, off-peak Manitoba Hydro prices are currently running in the 2.5 - 3 cents/KWhr range, compared to the SaskPower forecasted rate of 6 cents/KWhr. In addition, the consultant indicated the potential to buy lower-cost import power in place of increased usage of gas-fired generation. These factors could result in savings of about $18 million.

- **Operations, Maintenance and Administration (OM&A)** – The consultant notes SaskPower is capable of achieving greater productivity based on past performance than it is currently registering. On a unit cost basis, OM&A has increased by approximately 20 percent over the past six years. On this basis the consultant suggests savings of up to $5 million may be achievable in this area if a productivity gain of 2 percent is realized. The consultant also notes it is unlikely that short-term gains are possible.

- **Cost of Service Study** – SaskPower should carry out a detailed Cost of Service study to examine the specific way in which SaskPower's cost allocation methodology is applied, the parameters and controls that are used and the acceptable degree of rate rebalancing measures that should be implemented. This study should be undertaken in the next six months to permit a Panel review well in advance of the next rate increase application.

- **Depreciation Study** – SaskPower is expected to complete a Depreciation Study in the near future. This should be forwarded to the Panel for its review in advance of the next rate increase application.

- **Cost Allocation Methodology and Application** – Cost allocation methodology can be complex. The cost allocation methodology and its application as well as any changes should be provided to the panel for information prior to SaskPower's next rate application.

Panel Conclusions and Recommendations

OVERALL INCREASE

SaskPower proposed an average increase equivalent to 5.4 percent of its revenue from sales of electricity in Saskatchewan with average increases ranging from 0.9 percent to 12.0 percent, depending on the customer class. The overall average increase equates to 6.8 percent of revenue excluding customers who are [redacted] under long-term contract.

The Panel notes SaskPower is facing increasing costs of electrical generation. This is primarily due to low water levels creating a shortage of hydro generated electricity which is normally replaced by more expensive natural gas-fired generation.

Based on SaskPower's assumptions for a number of factors, their stated revenue requirement of $56 million appeared to be reasonable. However, the Panel notes and accepts the consultant's analysis that a number of these assumptions are subject to challenge and debate. Amendments to these assumptions should provide SaskPower reasonable opportunity to achieve its stated Return on Equity Target of 10 percent.

Load Growth Forecast – The Panel considered a range of options regarding the Load Growth Forecast. While the general economic trend across Canada has not been positive, the Panel notes Saskatchewan has often responded more moderately to both economic upturns and downturns than the rest of the country. The Panel also recognizes the Load Growth Forecast is not fully linked to the economic status of the province. The Panel believes a reduced Load Growth Forecast is appropriate.

Natural Gas Pricing – The Panel noted natural gas prices remain volatile. A significant portion of SaskPower's natural gas prices remains unhedged (approximately 45 percent). If the consultant's outlook for lower gas prices materializes, there is potential for savings to be realized.

Hydro Power Availability – The Panel reviewed the November 1 Outlook provided by SaskWater and noted the return to near normal hydro generation is unlikely. An allowance is necessary to cover the cost of replacement generation.

Import Power – The panel believes current economic conditions warrant the consideration of using cheaper imported power to replace gas-fired generation. It may be possible to achieve savings through such a strategic move.

Operations, Maintenance and Administration (OM&A) – The Panel agrees with the consultant's assessment that productivity improvements are possible within SaskPower's operations. The Panel recognizes an improvement in productivity is most likely to happen if it is determined to be a primary objective.

Depreciation Study – The Panel agrees with the consultant that SaskPower's Depreciation Study should be forwarded to the Panel for its review well in advance of the next rate increase application.

Cost Allocation Methodology and Application – Further to the previous Panel report and consultant's review, the cost allocation methodology and its application as well as any changes should be provided to the panel for information in advance of SaskPower's next rate increase application.

The Panel recommends a set of rate changes that will generate a 4.54 percent revenue increase (5.73 percent excluding contracts) sufficient to generate $47 M increased revenue for 2002.

RATE REBALANCING

The Revenue-to-Revenue-Requirement Ratio (R/RR) is commonly used in the industry as an indicator of the ratio of the revenue generated from a customer or a class of customers to the revenue required from that customer or class of customers to cover the costs associated with providing services to that customer class.

The revenue requirement includes provision for:

- fuel and purchased power costs;
- operating, maintenance and administration costs;
- depreciation, depletion and amortization costs;
- royalties, water rentals and taxes;
- finance charges; and,
- a target return on investment.

In the case of SaskPower, the costs of generating electricity for export sales is also included in calculating the revenue requirement for sales within Saskatchewan.

SaskPower identified a number of customer classes for which the Revenue-to-Revenue-Requirement Ratio was less than 0.95, (ie. Small and Large Manufacturing) as well as customer classes where the R/RR was greater than 1.05 in 2001, particularly Oilfields and Streetlights.

The Panel recognizes that SaskPower must take steps to correct the inequities inherent in the current rate structure and that rate rebalancing is an essential step. The Panel further recognizes that the industry standard for the R/RR is a range rather than a fixed ratio.

Rate and R/RR structures are complex formulae dependent upon a range of factors. There are significant variations of revenue/cost relationships not only between rate classes but also within the classes themselves. The Panel notes time constraints did not allow for an opportunity to review specific goals, allocation methodology and the impact of a four-year rate rebalancing plan. A full review at this time would determine if Rate Rebalancing allocations are on target, or if further shifts of costs are required to reach parity within customer classes. The Panel believes a detailed Cost of Service Study would be beneficial to all parties.

The Panel recommends a detailed Cost of Service Study be completed prior to the next rate application by SaskPower.

LIMITS TO RATE INCREASES FOR CUSTOMER CLASSES

Given the Panel's recommended adjustments to the assumptions leading to the revenue requirement calculation, the Panel felt a cap on maximum increases was warranted. The Panel noted SaskPower's application contained a cap of 10 percent over the class average increase. For example if the class average increase was 12 percent, no individual customer would be subject to an increase exceeding 22 percent.

In the Panel's view this cap, while relevant particularly in the context of rate rebalancing, should be more modest. A 22 percent rate increase for electrical service could be considered to create rate shock and have an extremely negative impact on retaining or advancing any economic growth for the province.

The Panel recommends the maximum increase for an individual customer be capped at 13 percent including Basic Monthly Charge + Energy Charge + Demand Charge.

The table on the following page summarizes the Panel's recommended average rate increase and cap by Customer class compared to SaskPower's application.

SaskPower Requested
Compared to
Panel Recommended Average Increases

Customer Class	SaskPower Requested Increase (Average %)	Panel Recommended Increase (Average %)	Estimated Average $ Increase /Month (Including Cap Effect)	Panel Recommended Maximum Increase (% Cap)
Urban Residential	7.1	7.1	4	13.0
Rural Residential	10.0	10.0	8	13.0
Farm	8.0	7.1	9	13.0
Urban Small Commercial	5.0	5.0	10	13.0
Rural Small Commercial	8.0	8.0	13	13.0
Urban General Service	5.0	5.0	64	13.0
Rural General Service	6.0	6.0	48	13.0
Small Manufacturing	12.0	10.0	164	13.0
Large Manufacturing	12.0	10.0	6,911	13.0
Power Rate	4.0	3.0	4,940	13.0
Power Rate - Contract	0.9	0.9	3,111	-
Oilfield	4.0	2.0	19	13.0
Streetlight	4.0	2.0	8	13.0
Reseller	10.0	7.1	165,483	-
System Average	**5.4**	**4.5**	-	-
System Average without Contracts	**6.8**	**5.7**	-	-

EFFECTIVE DATE

SaskPower proposed to implement the new rate structure December 1, 2001. To meet this implementation date now would require a retroactive application of the new rates to electricity and services provided in the past.

The Panel is of the view that charges should not be increased on past services. The Panel recognizes this will impact on SaskPower's ability to attain its targeted ROE for 2001.

The Panel recommends the increases in SaskPower electrical rates be effective January 1, 2002.

OTHER ISSUES AND CONCERNS

1. SaskPower International

The Panel notes that SaskPower International's (SPI) performance over the short term (five years) potentially impacts the customer rate base, creating pressure for SaskPower to require further rate adjustments. The Panel acknowledges Corporate Structure as a 'given'. However, SPI's activities are having an impact on the targeted Return on Equity and therefore have an impact on both the customer and the public.

The Panel notes the consultant's recommendation that SaskPower should seriously examine its future business relationship with SPI with a view to moving SPI's financial consequences from the responsibility of the SaskPower rate payer.

2. Public Facilities

The Panel received representations, letters and phone calls from a wide range of individuals representing public facility operators across the province. Concerns focused primarily on the impact the rate increases have on their operation and the limited funding many of these organizations have available to them to pay for the increased costs.

The Panel recognizes the pressure these proposed increases will create. However, the Panel notes these issues are outside its mandate and respectfully suggests these concerns would be more appropriately addressed through other mechanisms that can address public policy.

3. Energy Conservation/Consumption

As part of its rate restructuring program, SaskPower appears to be putting more emphasis on increasing those rate components that are 'fixed', eg. Basic Monthly Charge.

The Panel notes with concern that this approach significantly reduces any financial incentive for the customer to conserve energy and/or reduce consumption and suggests that SaskPower revisit this approach and/or provide a more complete explanation of long term plans in this regard. The results of the cost of Service Study may facilitate this review.

4. Rate Rebalancing Schedule

The Panel notes the SaskPower request for rate rebalancing was the second year of a four-year plan. Depending on factors such as the outcome of the Cost of Service Study (see recommendation on page 15), this four-year plan may warrant review and adjustment to a different timeframe.

5. Other Studies/Information

The Panel recommends SaskPower provide the Panel with its Depreciation Study and Cost Allocation Methodology and any associated changes prior to its next rate application.

6. Review Timetable

The Panel wishes to express significant concern regarding the very tight timetable (53 days) available to them for the SaskPower review. SaskPower is a complex operation with many rate components and customer classes requiring thorough review and analysis.

The Panel was further pressed by a concurrent SaskEnergy review.

In future, the Panel strongly recommends it have a minimum of 90 days for any SaskPower review.

Summary of Recommendations

In summary, the Panel recommends:

- a set of rate changes that will generate a 4.54 % revenue increase (5.73 percent excluding contracts) sufficient to generate $47 M increased revenue for 2002;
- a detailed Cost of Service Study be completed prior to the next rate application by SaskPower;
- individual customer increases be capped at 13 percent including Basic Monthly Charge + Energy Charge + Demand Charge;
- electrical rate increases be effective on services beginning January 1, 2002;
- SaskPower provide the Panel with its Depreciation Study and Cost Allocation Methodology prior to its next rate application; and
- in future the Panel be given a minimum of 90 days for any SaskPower Review.

IMPACT ON CUSTOMERS

The Panel recognizes many aspects of the Saskatchewan economy are particularly challenged at this time, ie. agriculture, manufacturing, forestry, mining and oilfields. Utility rate increase must be held to a minimum while establishing strategies to improve economic recovery.

Rate Rebalancing is critical so that customers who may be able to opt for alternative electrical suppliers because of the onset of the Open Access Trade Tariff (OATT) choose to remain with SaskPower. A large-scale departure of these customers would be detrimental to both the remaining customer classes and to SaskPower. Practically, seeking another supplier is not an option for the Resellers or large Power Class customers. This may change as new patterns for wheeling power are established.

The recommended rate changes reflect a closer balance between customer and movement towards SaskPower's goals of rate rebalancing.

IMPACT ON SASKPOWER

The North American economic climate has changed significantly in the four months since the preparation of the SaskPower Rate Proposal. Most of the changes have been of such a nature as to enable SaskPower to potentially reduce their revenue requirements.

The Panel is of the view SaskPower is capable of making these revisions to achieve the recommended reduced revenue levels and still have a reasonable opportunity to earn its target Return on Equity of 10 percent.

IMPACT ON THE PUBLIC

The rate changes will have an effect on several aspects of the public. Municipalities will have the advantage of increased surcharge revenues as a result of the new rates.

The public will benefit from rates that avoid rate shock and offer moderate increases that can be handled through steady growth and economic development. Increased, sustainable development will in turn have an even greater positive impact on the economy and the General Revenue Fund.

As SaskPower's principle shareholder, the restoration of the Return on Equity to a target near 10 percent benefits the public by earning a reasonable return on their investment.

It is the Panel's view, therefore, the rate changes recommended by the Panel are fair and reasonable, considering the interests of the customer, Crown corporation and the public

Appendix A:
Minister's Orders
SaskPower Electrical Rate Change

MINISTER'S ORDER

Saskatchewan Rate Review Panel
SaskPower Rate Change

WHEREAS by an Order dated July 27, 2000, issued pursuant to Section 16 *of The Government Organization Act*, the Minister of Crown Investments Corporation appointed a Ministerial Advisory Committee known as the Saskatchewan Rate Review Panel;

AND WHEREAS that Order provides for specific terms of reference for particular Crown Corporation rate change reviews to be attached by further minister's order;

AND WHEREAS it is desirable to establish terms of reference for a SaskPower rate change review and to attach the Terms of Reference to the previously mentioned Minister's Order;

NOW THEREFORE, I hereby amend the said Order by attaching Appendix A affixed hereto as **"Schedule F: SaskPower Rate Change Proposal Terms of Reference"** to the said Minister's Order.

Dated at Regina, Saskatchewan this 11th day of October, 2001.

Maynard Sonntag
Minister of Crown Investments Corporation

APPENDIX A

Schedule F:
SaskPower Rate Change Terms of Reference

Terms of Reference

The Saskatchewan Rate Review Panel is requested to conduct a review of SaskPower's request for an increase in its rates effective December 1, 2001.

The Panel shall provide an opinion of the fairness and reasonableness of SaskPower's proposed rate changes, considering the interests of the customer, the Crown Corporation and the public.

In conducting its review, the Panel will consider the following factors:

A) The reasonableness of the proposed changes to the rates in the context of SaskPower's forecasted delivery cost of service, comprised of:

- (i) SaskPower's anticipated costs for fuel (natural gas and coal);
- (ii) SaskPower's anticipated hydro facilities availability;
- (iii) SaskPower's load forecasts;
- (iv) SaskPower's planned maintenance program;
- (v) SaskPower's operating, administrative and maintenance expenses;
- (vi) SaskPower's depreciation and finance expenses; and,
- (vii) SaskPower's Corporate Capital Tax.

B) The revenue requirement resulting from the delivery cost of service.

C) The Panel shall consider the following parameters as given:

- (i) the current rate structure (i.e. components and classifications);
- (ii) the budgeted capital allocation, the rate base, and established corporate policies;
- (iii) the Return on Equity target of 10%;
- (iv) the non-capital spending levels as defined in (A) above;
- (v) the existing service levels;
- (vi) any existing supply contract;
- (vii) the revenue to revenue requirement ratio target range of 0.95 and 1.05 to be achieved by 2004; and,
- (viii) the cost of service methodology which allocates SaskPower's costs between the various rate classes.

The Panel must include in its report an explanation of how, in its opinion, implementation of the Panel's rate recommendations will allow SaskPower to achieve the performance inherent in the parameters outlined in (C), where the Panel's recommendations are different from SaskPower's proposed rate changes.

The Panel will not publicly release or require SaskPower to publicly release commercially sensitive material including, but not limited to, its fuel purchasing strategies (including hedging activities) and contracts with specific customers.

The Panel will release, as part of its final report, the results of the review of SaskPower's rate request as conducted by an independent third party.

Conduct of the Review

The Panel will present its report to the Minister of Crown Investments Corporation no later than December 7, 2001.

Appendix B:
Dillon Consulting Limited
Independent Review
of the SaskPower Rate Proposal
# of October 2001

Saskatchewan Rate Review Panel

Independent Review of the SaskPower Rate Proposal of October 2001

Report

November 2001

Saskatchewan Rate Review Panel
Independent Review of the SaskPower Rate Proposal of October 2001

01-9706-0101

Submitted by

Dillon Consulting Limited

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In reply, please refer to:
Our File: 01-9706-0101

November 30, 2001

DILLON CONSULTING

Saskatchewan Rate Review Panel
310 – 20th Street East, Suite 400
Saskatoon, Saskatchewan S7K 0A7

Attention: Mr. Bob Locoursiere
Chair – Sask Rate Review Panel

Independent Review of the SaskPower Rate Proposal of October 2001

Dear Mr. Locoursiere:

We are pleased to submit our independent review of SaskPower's Rate Proposal of October 2001.

The Rate Review Panel in their deliberations should note that in the SaskPower Proposal its forecasted revenue and expenditure assumptions are predicted on past trends and economic forecasts. Between the time the proposal was prepared and filed, a number of world economic circumstances have dramatically changed.

Based on these most recent trends and economic forecasts, the results of this review suggest the following:

1. Given the recent economic indicators, SaskPower's target of 3.1% growth in 2002 will not materialize.
2. Gas costs have significantly declined in the fall and are forecasted to remain lower than that presented in the application.
3. Imported power may be a cost-effective alternative to gas-fired generation, particularly if imported power is purchased during off-peak times.

While one cannot forecast the financial results with definitive certainty, it is fair to suggest that there are a number of options available to SaskPower's management team to generate the financial results required to meet their rate of return target of 10% and yet pass on a reduced rate increase for their consumers in this application. Based on our review, a $20 M reduction from the requested $56 M should be readily achievable.

Given SaskPower's plans to ask for a further increase of 1.98% next year, should the Review Panel recommend a lesser increase than that requested by SaskPower, and the suggested results do not materialize, future rate adjustments can then be taken to mitigate the negative or positive consequences.

Should you have any questions, please call.

Yours truly,

Dillon Consulting Limited

L. A. Buhr, M.Sc., P. Eng.
L.A.B. Consulting Ltd.
Senior Consultant

Kurt B. Simonsen, M.N.R.M., P. Eng.
Dillon Consulting Limited
Project Manager

LAB/KBS:kse
Attachments
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TABLE OF CONTENTS

Page No.

EXECUTIVE SUMMARY

1. **INTRODUCTION AND TERMS OF REFERENCE** 1

2. **THE SASKPOWER RATE PROPOSAL** 4

3. **SYSTEM OPERATIONAL ANALYSIS** 10

3.1. System Description *10*

3.2. System Load Forecasts *13*

3.2.1. Basic Premise – Economic Growth 13

3.2.2. Electricity Use Forecasts 14

3.2.3. System Load Forecast Summary 16

3.3. System Operation Description *16*

3.3.1. Coal-Fired Thermal Generation 16

3.3.2. Hydro Generation 17

3.3.3. Gas/Turbine Generation 19

3.3.4. Energy Imports and Exports 21

3.3.5. Meridian and Cory Co-Generation Plants 23

3.3.6. Wind Generating Facilities 23

3.3.7. Transmission and Distribution 23

3.3.8. Energy Conservation 24

4. **SYSTEM OPERATIONAL COSTS** 26

4.1. Energy Sales *26*

4.2. Fuel and Purchased Power Costs *26*

4.3. System Operations Summary and Analysis *29*

5. **CAPITAL COSTS, OPERATING, MAINTENANCE, ADMINISTRATION, PLUS OTHER FINANCIAL ISSUES** 31

5.1. Capital Cost Programs *31*

5.2. Operating/Maintenance/Administration *32*

5.3. Return on Equity *33*

5.4. SaskPower International *33*

5.5. Depreciation *35*

5.6. Corporate Capital Tax *35*

TABLE OF CONTENTS (Cont'd)

Page No.

5.7. Planned Maintenance *36*

5.8. Summary of Issues *36*

6. REVENUE REQUIREMENTS **38**

6.1. General *38*

6.2. Summary *38*

7. REVENUE TO REVENUE REQUIREMENT RATIOS **43**

7.1. Impacts on Various Customer Classes *43*

8. RATE COMPARISONS **46**

9. SUMMARY AND CONCLUSIONS **47**

9.1. Revenue Requirements *47*

9.2. Revenue to Revenue Requirement Issues *49*

9.3. Comparative Costs *50*

9.4. Recommendations for Required Studies *50*

LIST OF FIGURES

Page No.

Figure 1 SaskPower - Location of Major Facilities 6

LIST OF TABLES

Table 2.1: Proposed Rate Class increases 4
Table 2.2: SaskPower Revenue and Expenses 7
Table 2.3: Revenue-to-Revenue Requirement Ratios 8
Table 3.1: SaskPower Approximate Generating Capacity (MW) and Energy Capability (GWhr) 11
Table 3.2: SaskPower Total System Energy Use (GWhr) 15
Table 3.3: SaskPower Peak Demands (MW) 15
Table 3.4: SaskPower Coal-Fired Energy Production 17
Table 3.5: SaskPower Hydraulic Generation Capability 17
Table 3.6: SaskPower Hydraulic Energy Generated (GWhr) 18
Table 3.7: SaskPower Gas/Turbine Generating Capability 19
Table 3.8: SaskPower Gas/Turbine Energy Generated (GWhr) 20
Table 3.9: SaskPower Import/Export Potential 21
Table 3.10: SaskPower Imported Energy Used and Costs 21
Table 3.11: SaskPower Exported Energy Generated (GWhr) 22
Table 3.12: Growth in T & D Facilities from 1995 to 2000 24
Table 4.1: SaskPower Energy Sales Revenue from Annual Reports and Business Plan 26
Table 4.2: SaskPower Summary of Power Supply Costs 27
Table 5.1: SaskPower Capital Expenditures 31
Table 5.2: SaskPower OM&A Costs 32
Table 7.1: Year 2002 Rate Change & R./R.R. Ratios 43
Table 8.1: Typical Electricity Bill Comparisons 46

LIST OF APPENDICES

Appendix A Literature Consulted

EXECUTIVE SUMMARY

On October 11, 2001, the Saskatchewan Rate Review Panel ("the Panel") received Terms of Reference from the Minister responsible for Saskatchewan's Crown Investment Corporation, to conduct a review of SaskPower's request for an increase in rates effective December 1, 2001.

The Terms of Reference supplied by the Minister require the Panel to review the Proposal in light of a number of factors and parameters. These are summarized below:

- The Panel shall provide an opinion of the fairness and reasonableness of SaskPower's proposed rate changes, considering the interests of the customer, the Crown Corporation, and the public.

- In conducting its review, the Panel will consider the following factors:

  - The reasonableness of the proposed changes to the rates in the context of SaskPower's forecasted delivery cost of service, comprised of:

    - SaskPower's anticipated costs for fuel (natural gas and coal).
    - SaskPower's anticipated hydro facilities availability.
    - SaskPower's load forecasts.
    - SaskPower's planned maintenance program.
    - SaskPower's operating, administrative, and maintenance expenses.
    - SaskPower's depreciation and finance expenses.
    - SaskPower's Corporate Capital Tax.

  - The revenue requirement resulting from the delivery cost of service.

As part of the Panel's mandate, the Panel was required to engage the services of a consultant to assist the Panel in its review of the SaskPower Rate Proposal. Dillon Consulting Limited (Dillon) was retained by the Panel in October of 2001.

SaskPower is seeking a set of rate changes that will result in a 5.4% system average increase (6.8% increase, excluding contracts) effective December 1, 2001. The proposed rate increase will result in an additional $56 M in annual revenues.

SaskPower's Rate Proposal is designed to accomplish three objectives:

- Increase revenues to offset increases in fuel and purchased power expenses. These costs are expected to increase $57 M between 2001 and 2002.

- Rebalance rates to ensure that there is more equity between various rate classes and less cross-subsidization.

- Improve the rate design itself for each rate class to improve consistency and equity.

SaskPower has provided substantial documentation to support this revenue requirement. Specific elements that have been suggested as primary contributors to the requested amount are:

- Load growth of 3.1% in 2002, which when supplied by high price natural gas, could result in an increased cost/shortfall of $13 M.
- Lower hydro production than normal (median), which when offset by higher priced natural gas generation, could increase costs by $14 M.
- Higher coal costs due to royalty increases and price escalations could increase costs by $23 M.
- Higher natural gas costs in 2000 and 2001 probably cost SaskPower $12 M and $50 M, respectively. Current gas prices are to a large degree set for 2002, but with slumping prices in late 2001, it is difficult to translate this into an increased cost for 2002.
- Export electricity sales are expected to decline in quantity and unit price for 2002, with a potential 10% reduction in revenue of $10 M.
- Import electricity prices will rise for 2002 and use of import power will be reduced. The cost of natural gas-fired generation to compensate could be in the order of $18 M.
- Operating, maintenance, and administration costs are expected to rise by $13 M in 2002, but spread over a large energy load will mean the unit cost remains unchanged.
- Depreciation charges in 2002 will be up by $9 M.
- Financing charges in 2001 will remain constant for 2002.
- Losses/debt charges flowing from SaskPower International would add $1 M to $2 M to 2002 costs.

Assuming all of the above assumptions are valid, these items, as defined by Dillon, would theoretically add significantly to SaskPower's revenue requirements. However, they are not directly additive and could realistically equate to $40 to $60 M. As such, they appear to support the $56 M additional revenue requirement identified by SaskPower.

However, it is reasonable to re-examine some of the foregoing assumptions. Based on our review and consideration of recent economic circumstances, we are recommending the following alternative short-term scenarios be considered:

- ***Load Growth*** – Recent events and economic forecasts would suggest that SaskPower's 3.1% energy load growth in 2002 is too optimistic. An assumed growth rate of 1.0 to 1.5% would reduce the projected revenue requirement by $6 to $10 M.
- ***Hydro Power Availability*** – A more favourable outlook of normal flow conditions would reduce the revenue requirement by approximately $14 M. Conversely, a less favourable outlook could increase the requirement for gas-fired generation and associated cost increases of approximately $14 M.
- ***Higher Coal Costs*** – Because there are consequences of higher taxes and already negotiated price escalations, no change in additional revenue requirement is likely.
- ***Higher Natural Gas Costs*** – Recent declines in the price of natural gas would suggest that SaskPower's actual costs in 2002 could be as much as ¢1/KWhr lower than indicated in the

Rate Proposal. This could equate to a reduction in revenue requirements of approximately $15 M, assuming the indicated gas generated energy is actually used.

- ***Export Electricity Sales*** – A more optimistic viewpoint would suggest that export prices will remain constant with continuing good sales assuming that Alberta's energy needs and current high prices will only drop gradually from their current high levels. This would suggest that an anticipated revenue gain of $15 M for 2002.
- ***Higher Import Prices/Lower Power Availability*** – The current economic situation suggests that a more optimistic view of potential import power may be warranted. SaskPower's interconnections to the US Basin and Manitoba do have significant capabilities for import of power at levels three times SaskPower's 2002 forecast. Prices in Manitoba for off-peak power have been running in the ¢2.5-¢3.0/KWhr range. This is significantly lower than the average import price paid by SaskPower in 2001 of ¢3.95/KWhr and considerably lower than the ¢6/KWhr forecast by SaskPower. This 2001 scenario suggests that SaskPower could reduce costs by at least $18 M in 2002 by increased focus on import power relative to natural gas generation.
- ***Increased Operation/Maintenance/Administration Costs*** - Past performance by SaskPower suggests that higher productivity is achievable. For 2002, with the recent introduction of Queen Elizabeth Gas Turbines, Meridian Co-generation, and Cory Co-generation, it is likely that short-term gains are possible.
- ***Increased Financing Costs*** – SaskPower's forecast of little or no increase in financing costs for the Year 2002 is probably appropriate. However, the longer-term implications of investments in SPI or other generation facilities may see a significant increase in financing costs two to four years from now.
- ***Depreciation*** – Forecasts provided by SaskPower suggest that the depreciation expense will rise by $9.0 M in 2002, presumably reflecting the addition of the Cory facility. If the overall capital program, including SPI ventures taking place, the future depreciation charges will rise significantly.
- ***SPI Ventures*** – SaskPower forecasts suggest that capital investments inside Saskatchewan and elsewhere may add $483 M to the long-term debt by 2006. The result would be interest charges of $30 M/year at that time. This level of financing cost increase will be difficult to absorb if SaskPower's financial situation is below target in 2002.

This review examined a number of operational scenarios which demonstrated potential savings. These scenarios assumed a 1.5% economic growth rate, a shortfall in SaskPower's hydraulic power production of 390 GWhr due to lower water levels, and various increases in the amount of imported energy. Based on this analysis, savings of $27 M to $32 M could be achieved. Our recommendation would be to consider reducing the requested increase by a similar or lesser amount. A $20 M reduction from the requested $56 M should be readily achievable.

SaskPower should carry out a detailed Cost-of-Service study, which examines the specific way in which SaskPower's cost allocation methodology is applied, the parameters and controls that are used, and the acceptable degree of rate rebalancing measures that should be implemented. This should be undertaken within the next six months in order to permit a Rate Panel Review well in advance of the next rate increase proposal.

SaskPower's soon to be completed Depreciation Study should be forwarded to the Rate Review Panel for its review as soon as possible and certainly no later than mid-summer 2002.

SaskPower should seriously examine its future business relationship with SaskPower International with a view to moving SaskPower International's financial consequences from the responsibility of the SaskPower rate payer. It would also reflect on the perceived issue of conflicting business interests of the two organizations in selecting future power supply strategies.

1. INTRODUCTION AND TERMS OF REFERENCE

On October 11, 2001, the Saskatchewan Rate Review Panel ("the Panel") received Terms of Reference from the Minister responsible for Saskatchewan's Crown Investment Corporation, to conduct a review of SaskPower's request for an increase in rates effective December 1, 2001.

The Terms of Reference supplied by the Minister require the Panel to review the Proposal in light of a number of factors and parameters. These are summarized below:

- The Panel shall provide an opinion of the fairness and reasonableness of SaskPower's proposed rate changes, considering the interests of the customer, the Crown Corporation, and the public.

- In conducting its review, the Panel will consider the following factors:

  - The reasonableness of the proposed changes to the rates in the context of SaskPower's forecasted delivery cost of service, comprised of:

    - SaskPower's anticipated costs for fuel (natural gas and coal).
    - SaskPower's anticipated hydro facilities availability.
    - SaskPower's load forecasts.
    - SaskPower's planned maintenance program.
    - SaskPower's operating, administrative, and maintenance expenses.
    - SaskPower's depreciation and finance expenses.
    - SaskPower's Corporate Capital Tax.

  - The revenue requirement resulting from the delivery cost of service.

- The Panel shall consider the following parameters as given:

  - The current rate structure (i.e., components and classifications).
  - The budgeted capital allocation, the rate base, and established corporate policies.
  - The return on equity target of 10%.
  - The non-capital spending levels as defined in the above.
  - The existing service levels.
  - Any existing supply contract.
  - The revenue to revenue requirement ratio target range of 0.95 and 1.05 to be achieved by 2004.
  - The cost of service methodology which allocates SaskPower's costs between the various rate classes.

As part of the Panel's mandate, the Panel was required to engage the services of a consultant to assist the Panel in its review of the SaskPower Rate Proposal. Dillon Consulting Limited (Dillon) was retained by the Panel in October of 2001.

The objective of this report is to review the SaskPower Rate Proposal considering the interests of the customer, the Crown Corporation (SaskPower) and the public, and ascertain the overall fairness and reasonableness of the proposed rate change. To accomplish this objective, Dillon met with officials from SaskPower and the Panel to discuss details of the Rate Proposal and subsequently requested and reviewed supporting documentation.

This report examines the SaskPower Rate Proposal from a number of functional perspectives as outlined below:

- System Operational Analysis
- System Operational Costs
- Load Forecasts
- Capital and Maintenance Programs (including subsidiary companies)
- Annual Revenue Requirements
- Revenue-Revenue Requirements
- Rate Structures/Rate Increases

The methodology used to complete this review involved the following:

- Attendance at a formal presentation by SaskPower of the Proposal to the Panel on October 19, 2001.

- A comprehensive review of the Proposal by the study team.

- The derivation of questions for SaskPower as a result of the study team's review of documentation.

- Meetings with SaskPower officials on October 29, 30, and 31 to discuss questions posed by the study team and review additional documentation.

- Follow-up conference calls and correspondence with SaskPower officials on additional questions.

- Submission of a draft report to the Panel on November 23, 2001, followed by a meeting with the Panel on November 26 and 27, 2001 to discuss the draft report.

- Submission of the final report on November 30, 2001.

Through the course of this review, numerous documents were provided by SaskPower to the study team in support of the Rate Proposal and in response to questions from the study team. A list of documents reviewed for this report is provided in Appendix A.

Dillon would like to acknowledge SaskPower's cooperation in their response to questions and provision of supporting documentation for this review.

The scope of this review was largely to determine the overall fairness and reasonableness of SaskPower's proposed rate change. It was not within the scope of this review to conduct a comprehensive study of SaskPower's operations for the purpose of making specific recommendations. Rather, SaskPower's operations and costs were reviewed to ascertain the fairness and reasonableness of SaskPower's proposed rate change.

2. THE SASKPOWER RATE PROPOSAL

SaskPower is seeking a set of rate changes that will result in a 5.4% system average increase (6.8% increase, excluding contracts) effective December 1, 2001. The proposed rate increase will result in an additional $56 M in annual revenues. The proposed increases by rate class are outlined in Table 2.1 below.

Table 2.1: Proposed Rate Class Increases

Customer Class	Revenue Increase*
Urban Residential Customers	7.1%
Rural Residential Customers	10.0
Farm Customers	8.0
Urban Small Commercial Customers	5.0
Rural Small Commercial Customers	8.0
Urban General Services Customers	5.0
Rural General Service Customers	6.0
Small Manufacturing Customers	12.0
Large Manufacturing Customers	12.0
Power Rate Customers	4.0
Power Rate Contract Customers	0.9
Oilfield Customers	4.0
Streetlight Customers	4.0
Reseller Customers	10.0

Notes to the above table:

1. Revenue increases are weighted averages.
2. The average rate increase is 5.4%, including power rate contract customers and 6.8%, excluding the power rate contract customers.

SaskPower's Rate Proposal is designed to accomplish three objectives:

- Increase revenues to offset increases in fuel and purchased power expenses. These costs are expected to increase $57 M between 2001 and 2002.
- Rebalance rates to ensure that there is more equity between various rate classes and less cross-subsidization.
- Improve the rate design itself for each rate class to improve consistency and equity.

SaskPower's Rate Proposal of October 2001 notes that there has seen a substantial increase in fuel and purchased power expenses. The major cause has been the rise in consumption of natural gas as well as historically high natural gas prices and natural gas price volatility. SaskPower has committed to expanding generating capacity, largely through construction of gas-fired facilities. As of June 2001, SaskPower had the following mix of generation sources:

- Three coal-fired thermal generation plants - 1,653 megawatts:
  - Boundary Dam
  - Poplar River
  - Shand
- Four gas-fired thermal stations - 539 megawatts:
  - Queen Elizabeth
  - Landis
  - Meadow Lake
  - Success
- Seven hydro generation stations - 853 megawatts:
- SaskPower wind - 5 megawatts.

Total Installed Capacity = 3,050 megawatts

In addition, SaskPower also has contracts with the following energy suppliers:

• BEPL Seasonal Diversity	50 megawatts
• Meridian (gas)	232 megawatts
• Cory* (gas) (50% owned by SPI)	263 megawatts
• Sunbridge Wind	11 megawatts
Total Contractual Capacity	556 megawatts
Total SaskPower Capacity (installed and contracts)	3,606 megawatts

* Cory comes on stream in November of 2002.

Figure 1 shows the location of SaskPower's generating facilities, major transmission lines, and interconnects.

Increased Revenues and Costs

With a substantial portion of SaskPower's generating capability relying on natural gas, and the recent volatility in gas prices, fuel and purchased power costs have increased from $172 M in 1996 to an estimated $485 M in 2001. Fuel and purchase power costs are expected to be $441 M in 2002.

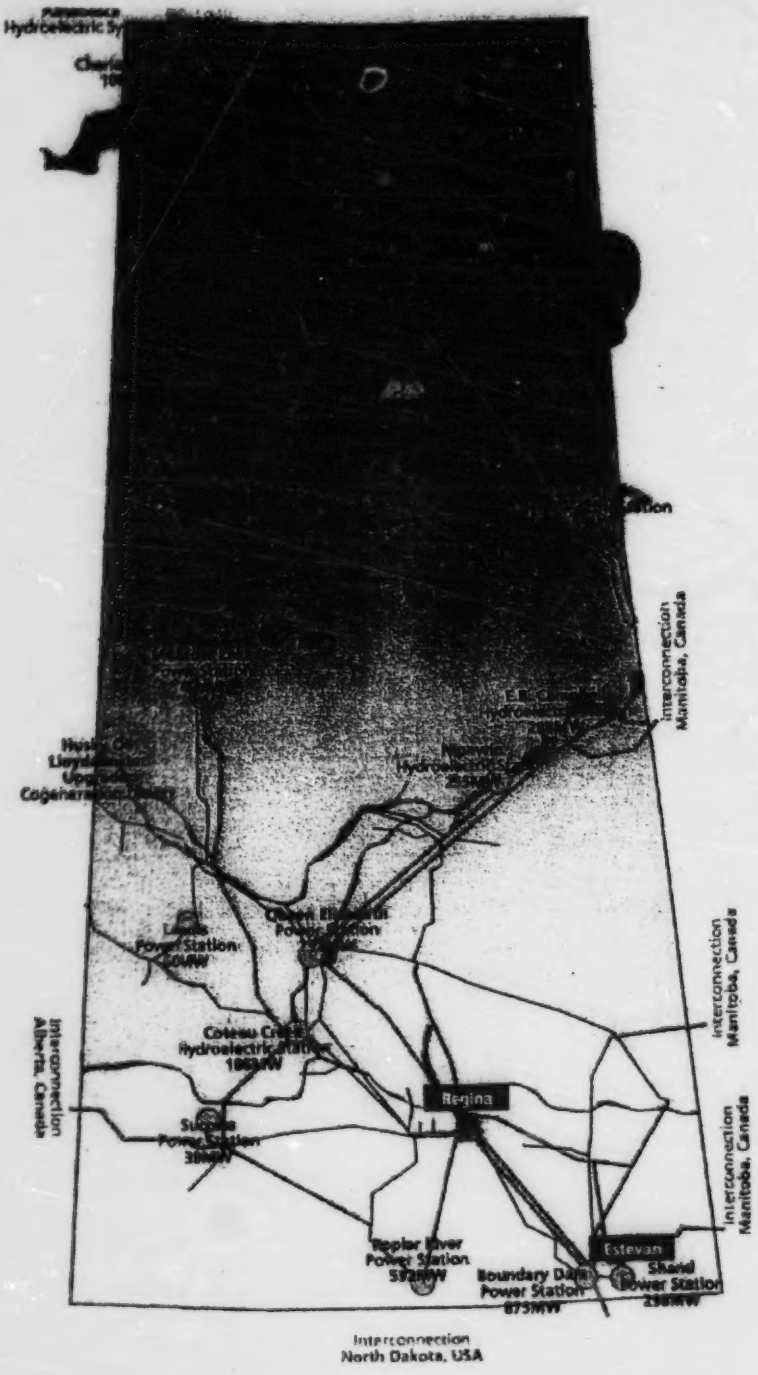

Figure 1: SaskPower – Location of Major Facilities

Revenues at SaskPower have increased from $883 M in 1996 to an estimated $1,124 M in 2001. The increase in revenue of approximately $241 M falls short of offsetting the increase in fuel and purchased power costs.

Table 2.2 summarizes SaskPower's income and expenses.

Table 2.2: SaskPower Revenue and Expenses

	2000 Actual	2001 Forecast*	2002 Budget*
Revenue			
SaskPower Customers	$952 M	$1,000 M	$1,092 M
Export Revenues	$128 M	$112 M	$95 M
Ancillary Revenues	$21 M	$17 M	$16 M
Total Revenue	$1,101 M	$1,129	$1,203
Expenses			
Fuel and Purchased Power	$384 M	$485 M	$441 M
Operating, Maintenance, and Administration	$264 M	$273 M	$284 M
Depreciation and Amortization	$151 M	$154 M	$160 M
Taxes	$24 M	$26 M	$27 M
Future Asset Removal and Site Restoration	$14 M	$12 M	$12 M
Finance Charges	$138 M	$151 M	$151 M
Total Expenses	$975 M	$1,102 M	$1,075 M
Net Income	$126 M	$27 M	$128 M

* as at September 7, 2001, with proposed rate increase.

With the proposed rate increase, SaskPower's net income in 2002 is expected to be $128 M. Without the rate increase, net income is forecasted to be $70 M. The return on equity for 2002 is expected to be 10%, with the approved rate increase.

Rate Rebalancing

The second objective of SaskPower's Proposal is to rebalance the rates so there is more equity between the various rate classes and less cross-subsidization. SaskPower is seeking rate rebalancing to ensure that rates better reflect the cost of providing electrical services. The standard that exists throughout the industry holds that revenues for a given class of customer should fall within a range ratio of 0.95 to 1.05 to the cost of serving that class of customer, with 1.00 representing revenues exactly matching costs. SaskPower's current rate structure falls short of this standard and needs to be adjusted accordingly to meet current and future challenges. SaskPower is seeking to establish rates that meet competitive standards for the revenue-to-revenue requirement ratio. SaskPower's objective is to have a revenue-to-revenue requirement ratio of 0.95 to 1.05. It is generally accepted in the industry that achieving a complete range of rates that are all at the ideal ratio is not practically feasible, given all the

dynamic variables. Consequently, the range falling on either side of the ideal has been accepted. Table 2.3 illustrates the current status of SaskPower's rate structure showing the cross-subsidization and the impact of the proposed rates.

Table 2.3: Revenue-to-Revenue Requirement Ratios

Class of Service	Year 2002 Revenue/Rev. Req. Ratio (existing rates)	Year 2002 Revenue/Rev. Req. Ratio (proposed rates)
Urban Residential	0.97	0.98
Rural Residential	0.90	0.94
Total Residential	0.96	0.97
Farms	0.96	0.98
Small Commercial - Urban*	1.02	1.01
Small Commercial - Rural*	0.95	0.97
Total Small Commercial	1.01	1.01
General Service - Urban	1.03	1.03
General Service - Rural	1.01	1.01
Total General Service	1.03	1.02
Small Manufacturing	0.82	0.86
Large Manufacturing	0.83	0.89
Power (published rates)	1.04	1.03
Power (contract rates)	1.01	0.98
Oilfields	1.13	1.11
Streetlights	1.12	1.11
Reseller	0.95	1.00
Total (System)	1.00	1.00

* Public facilities included within class.

Note:

A ratio of greater than 1.00 implies that the customer class is paying too much relative to the cost of supplying electricity. A ratio below 1.00 implies that the class is being subsidized.

There are three key factors that are driving SaskPower to design its rates in this direction. The first is the basic issue of fairness in that all customers should pay their fair share of the costs of service, and no more. Fundamentally, customers should not pay for costs attributable to other customers. The second key factor is that properly balanced rates reduce the incentive for uneconomic alternatives for those customers who are providing the subsidy. The final factor is the desire to secure the contribution to fixed costs from those customer classes at risk of leaving the SaskPower system in order to contain the rates across the system. Should such customers abandon SaskPower for self-generation alternatives, there will inevitably be additional upward rate pressure on the remaining customer base to cover those fixed costs that do not vary with demand.

The study team has reviewed the costing methodology adopted by SaskPower. In general, SaskPower has implemented the recommendations of the Foster Report "Review of Costing Methodologies" (Foster, 1998), which examined costing methodologies used by SaskPower. With the absence of a detailed Cost-of-Service-Study and rate allocation process, the study team was unable to specifically address the current rate design and how various parameters would effect individual customers.

Rate Class Improvements

As with the rate balancing proposal, SaskPower also wishes to address the cross-subsidization issue within the rate classes themselves. As a result, not all customers within a rate class will necessarily see the same increase. Some may actually see a rate decrease while others may see up to a 22% increase within a rate class. The actual increase is dependent on energy consumed, the basic charge, and the demand rate.

To generate additional revenues, SaskPower is recommending revenues from each customer class be increased as highlighted in Table 2.1.

3. SYSTEM OPERATIONAL ANALYSIS

3.1. System Description

SaskPower is the principal supplier of electricity in Saskatchewan. Founded as the Saskatchewan Power Commission in 1929, its mandate is to deliver safe, reliable, cost-effective power to the residents of Saskatchewan. SaskPower was incorporated as a provincial Crown Corporation in 1950 and is governed by the Province's Power Corporation Act.

The system currently consists of:

- Three coal-fired thermal plants.
- Seven hydro-electric systems.
- Four natural gas combustion stations.
- More than 150,000 km of electrical transmission and distribution power lines.

Additionally, SaskPower purchases electricity from:

- The Meridian co-generation plant at Lloydminster.
- Alberta, U.S. Basin, and Manitoba electrical utilities.

Coming on-stream in 2001-02 are:

- Cory co-generation facility near Saskatoon (50% owned by SaskPower International).
- Wind generating facilities (Sunbridge).
- SaskPower wind generating facilities (in partnership with the federal government).

The following table identifies the current capacities (MW) and maximum/median energy capabilities (GWhr) based on historical and projected performance of the various coal, gas, hydro, co-generation, wind, and import power sources.

Table 3.1: SaskPower Approximate Generating Capacity (MW) and Energy Capability (GWhr)

	2003	2002	2001	2000	1998
Hydro					
• MW	853	853	853	853	847
• GWhr	Variable year to year (2,400 - 4,400)				
Steam/Coal					
• MW	1,658	1,658	1,658	1,658[1]	1997[1]
• GWhr	11,500± (since 2000)				
Gas Turbine					
• MW	539	539	539	378[1]	136[1]
• GWhr	900 - 2,500 (subject to gas availability)				
Internal Purchase					
• MW	556[3]	232	232	180[2]	–
• GWhr	3,400[3]	1,800	1,800	1,500	–
Out of Province Purchase					
• MW	325[4]	325[4]	325	325	325
• GWhr	900 - 2,000 (subject to transmission constraints during peak and off-peak times)				
Total MW[5]	**3,931**	**3,607**	**3,607**	**3,394**	**3,305**
GWhr	**19,000 - 24,000 (depending on climatic/market/transmission constraints)**				

Notes:

1. Queen Elizabeth coal-fired plant switched to gas-fired after 1998.
2. Meridian co-generation plant came on-stream in 2000.
3. Cory co-generating plant will fully come on-stream in 2003.
4. Actual capacity is subject to transmission constraints.
5. Wind Power would add approximately 16 MW, but is not considered firm capacity.

Figure 1 illustrates the location of the various generation facilities and the major transmission network.

Natural Gas Generation

SaskPower's emphasis in satisfying future generating requirements seems to rely largely on expanding gas-fired generation. The recent conversion and repowering of the Queen Elizabeth Station and SaskPower International (SPI's) investment in the Cory Co-generation project reveals this trend. In addition, SaskPower has entered into a contractual arrangement to purchase power from the Meridian Plant in Lloydminster, Saskatchewan.

Total gas generation capability is in the order of 539 MW. The average fuel cost for gas-fired generation is forecasted at approximately ¢5.9/KWhr for 2002.

Thermal (Coal) Generation

SaskPower has no long-term plans for expansion of coal generating facilities due to capital costs and environmental concerns from release of greenhouse gases. The current coal-fired generating capacity at the Boundary Dam, Poplar River, and Shand stations account for approximately 55% of the total installed capacity. Total coal generation capability amounts to approximately 1658 MW. The average reported cost of coal-fired generation is ¢1.6/KWhr.

Hydraulic Generation

SaskPower owns and operates seven hydro generating facilities. Under ideal circumstances, hydro generation can account for approximately 28% of total installed capacity. Future additional hydraulic generating capability is very limited. Hydraulic generating capability is also premised on adequate water flow conditions. The recent low water conditions have resulted in a forecast of hydraulic power accounting for 17% of total forecast production. This loss in available hydraulic capacity results in a reliance on power from gas or coal sources or the importation of electricity. Should water levels improve, the cheaper hydraulic power becomes more attractive. The average cost of hydro generation is ¢0.3/KWhr, primarily for water rental fees.

Wind Generation

SaskPower has also invested in wind power. These are the Sunbridge 11 MW and SaskPower 5 MW projects. Although wind power is a clean source of power, it has a poor reliability factor resulting in the need to have 100% back-up generating capacity.

Purchased Power

Purchased power also forms a large part of SaskPower's overall supply capability. Total purchasing capacity is in the order of 556 MW from either the Meridian, Cory, or Sunbridge Energy facilities within Saskatchewan.

Imported Power

Imports also account for a component of SaskPower's energy supply. In the Year 2000, imports accounted for approximately 12% of total energy sales. Imported energy comes from Manitoba, the United States, and to a lesser less extent from Alberta. The average cost to purchase power from imports was approximately ¢3.5/KWhr in 2000.

3.2. System Load Forecasts

3.2.1. Basic Premise – Economic Growth

System load forecasts for an electrical utility are typically conducted annually. These load forecasts serve as long-term planning tools in an effort to anticipate future electrical generation demands as well as transmission and distribution requirements. One of the fundamental tools used for anticipating future energy demand is projected economic growth.

The Province of Saskatchewan has achieved an increase in GDP of 4.9% over the last ten years, and 2.7% over the last five years. This was achieved with a provincial population growth increase of 1.7% over the last ten years and 1.4% over the last five years. Recent forecasts suggest that the population growth for the next five years could be in the order of 0.10% and 0.16% for the next ten years.

Forecasts of GDP growth rates in current dollars for the province, as used in SaskPower's Business Plan, are 3.5% for the next five years and 4.4% for the next ten years. These growth rates may be somewhat optimistic after the September 11, 2001 terrorist event and the recent downturn in the world economy.

The most recent economic forecasts indicate that there will be a significant decline in economic growth and inflation in the short-term (six to twelve months). The prospects beyond that is very uncertain. The size and duration of the economic consequences of the terrorist attacks of September is difficult to assess. For this reason, the Bank of Canada did not present its usual conventional semi-annual forecast in November but chose instead to present an "economic outlook" based on two assumptions: (1) that there will be no further major escalations of terrorism and (2) that business and consumer confidence will return to normal levels in the second half of 2002. Based on these two assumptions and given the extensive monetary and fiscal stimulus provided, the Bank of Canada is anticipating a 2% growth in the first half of 2002 and a 4% in the second half of 2002. Core inflation is anticipated at 1.5% and total inflation at 2%.

The significant uncertainty on the geopolitical front makes the economic outlook internationally, very difficult. The wildcard in the outlook in the US, as well as in Canada, is the state of confidence, both with consumers and with business. The 11% plunge in equity markets immediately following the terrorist attacks of September 11 and the flurry of layoff announcements speaks further of how companies and individuals are assessing their own near-term prospects. Consumer confidence is at risk and has shown a considerable drop. Layoffs and corporate bankruptcies may add to the gloom. Consumers will likely wait for good news on both fronts; the war and layoffs, before they become a driving force in the economy again.

Canada is the sixth largest exporter of goods in the world. Within Canada, Saskatchewan is the second most export dependent province behind Ontario. Saskatchewan exports more than 60% of all its produce and more than 70% of all its agricultural production. Global overproduction, depressed international prices, both in agriculture and energy, and depressed international economies (especially the US) does not bode well for Saskatchewan for 2002.

The current economic slowdown is almost synchronized globally which means that it is harmful to trade dependent economies and will certainly affect Saskatchewan as a result. Commodity producers may feel the decline keenly; weakness in agricultural output and consumer spending may limit growth.

The drought of 2001 has reduced crop production by 31% compared with 2000. The forecast for 2002 is an increase of 13.9% over 2001, far short of 2000 levels. In the mining sector, low commodity prices for oil and gas will result in fuel output growth of 2.1% and 2.9% for 2001 and 2002 respectively. Net inter provincial migration shows a decline of 0.4% in 2001 and 0.1% growth in 2002. The job count shows a 2.2% decline in 2001 and a 0.2% growth is forecasted for 2002. Real GDP is forecasted to grow 1% in 2001 and 2% in 2002. Based on this data, a 0% growth path is quite possible in the first quarter.

The prospects for global economic growth are not positive. The factors which are driving economic uncertainty – the war and dwindling consumer and business confidence – are not showing any positive signs. For the year 2002 the Province of Saskatchewan could expect minimal growth in its agricultural sector with little changes in the price of oil and gas. A 1-1.5% growth in the economy and an inflation rate of 1.5% may not be unreasonable.

SaskPower's load growth is expected to reflect the influence of overall provincial economic performances, particularly in the short-term (five years) with the recent global economic downturn.

3.2.2. Electricity Use Forecasts

SaskPower is forecasting its total energy requirements (energy sales and losses) to grow by 1.6% per year over the next ten years. This will result in a 3,082 GWhr increase from 18,179 in Year 2001 to 21,261 GWhr in 2011. Of the 3,082 GWhr growth, approximately two thirds is expected by 2006.

SaskPower's forecast of peak system load anticipates a 1.5% per year growth over the next ten years. This equates to a 475 GWhr increase from 2,882 GWhr in 2001 to 3,357 GWhr in 2011. Of the 475 GWhr growth, approximately two thirds is expected by 2006.

These forecasts are based on a compilation of sales forecasts for key account, oilfield, commercial, residential, farm, and reseller customers, including internal use, system losses, etc. Tables 3.2 and 3.3 highlight total system energy and peak demand projections by SaskPower.

Table 3.2: SaskPower Total System Energy Use (GWhr)

	1991	1996	2001	2006 Forecast	2011 Forecast	Ten-Year Forecast	% of Growth in First Five Years
Key Account	3,444	5,267	6,083	6,869	7,246	1.8%/year	68%
Oilfield	623	1,031	1,620	2,375	2,530	4.6%/year	83%
Commercial	3,027	3,135	3,488	3,801	3,973	1.3%/year	67%
Residential	2,243	2,376	2,375	2,466	2,548	0.7%/year	60%
Farm	1,381	1,450	1,327	1,354	1,382	0.4%/year	49%
Reseller	1,081	1,162	1,259	1,343	1,396	1.0%/year	61%
Corporate Use	82	90	120	116	117	-0.3%/year	–
Losses, etc.	1,362	1,847	1,897	2,001	2,068	0.9%	61%
Total Energy Requirements	**13,243**	**16,357**	**18,179**	**Low = 19,096 Most Likely = 20,324 High = 21,442**	**Low = 19,515 Most Likely = 21,261 High = 23,054**	**1.6% (2.3% for first five years)**	**73%**

The above table illustrates SaskPower's most likely forecast of total energy requirements. This amounts to a 2,145 GWhr increase by 2006 and a 3,082 GWhr increase by 2,011 from 2001 levels. The low forecast would see these additional requirements at 954 MW (by 2006) and 1,373 MW (by 2011). A high forecast would see additional requirements at 3,300 MW (by 2006) and 4,911 MW (by 2011).

Table 3.3 shows projected peak electrical demands.

Table 3.3: SaskPower Peak Demands (MW)

	1991	1996	2001	2006 Forecast	2011 Forecast	Five-Year Growth Rate	Ten-Year Growth Rate
Total Grid Demand	–	–	–	3,030 (low)	3,086 (low)	1.5%	0.9%
	2,300	2,650	2,882	3,219 (most likely)	3,357 (most likely)	2.2%	1.5%
	–	–	–	3,402 (high)	3,645 (high)	2.9%	2.1%

From the above, it is apparent that the most likely scenario would require an additional capacity need of 337 MW (by 2006) and 475 MW (by 2011). This additional need could be as low as 118 MW (by 2006) and 204 MW (by 2001) or as high as 520 MW (by 2006) and 763 MW (by 2001).

3.2.3. System Load Forecast Summary

SaskPower has anticipated a GDP growth rate for the province of approximately 3.5% for the next five years and 4.4% for the next ten years. Given today's economic climate, low agricultural and mining commodity prices, and overall population growth, total system energy requirements and peak demand requirements may well favor the low side of forecast expectations. This would result in a total system energy requirement of 19,000 GWhr and a peak demand of 3,030 MW in 2006. The Rate Proposal is predicated on a relatively optimistic growth scenario. This has implications to the corporation on fuel costs and revenue expectations. Given the recent substantial decline in natural gas prices and less optimistic growth scenario, fuel and energy costs could be less than that forecasted by SaskPower.

3.3. System Operation Description

3.3.1. Coal-Fired Thermal Generation

3.3.1.1. General

SaskPower currently operates three coal plants:

- Boundary Dam (six units) - 875 MW capacity/5,600 GWhr/year.
- Shand (one unit) - 298 MW capacity/2,300 GWhr/year.
- Poplar River (two units) - 592 MW capacity/4,600 GWhr/year.

These plants utilize lignite coal from the mines in southern Saskatchewan. They produce relatively inexpensive energy with fuel costs in the range of ¢1.6/KWhr.

The coal plants operate as base load energy suppliers, running almost continuously and provide in excess of 48% of SaskPower's energy needs.

These plants however have considerable outstanding environmental liabilities, which are being addressed in cooperation with Saskatchewan Environment. In recent years, these liabilities have led to energy conversion and upgrading projects that have used 50±% of the annual capital budget.

Table 3.4 highlights historical energy produced by coal-fired thermal generation and forecasted generation potential.

Table 3.4: SaskPower Coal-Fired Energy Production

	Actual						Estimated				
	1996	1997	1998	1999	2000	2001 Forecast	2002	2003	2004	2005	2006
Generation GWhr	11,225	11,256	11,609	11,551	11,436	11,711	11,789	11,448	11,613	11,450	11,541

3.3.1.2. Coal-Fired Thermal Generation Summary and Analysis

As can be seen from Table 3.4, SaskPower is maintaining a "stay-the-course" approach with respect to coal-fired energy production. SaskPower's long-term plans do not see the construction of coal-fired generating stations. Long-term plans continue to see coal servicing the base energy demands. Expenditures in coal-fired energy production are focussed on ongoing operation and maintenance of existing stations and improvements in emission control equipment

3.3.2. Hydro Generation

3.3.2.1. General

SaskPower has a total of seven hydroelectric generation stations. These are outlined in Table 3.5 below.

Table 3.5: SaskPower Hydraulic Generation Capability

	Installed, Capacity[1] (MW)
Saskatchewan River	
▪ EB Campbell Generating Station (eight units)	288
▪ Nipawin Generating Station (three units)	255
▪ Coteau Creek Generating Station (three units)	186
Churchill River	
▪ Island Falls Generating Station	95
Subtotal	824
Athabasca	
▪ Wellington Generating Station	5
▪ Waterloo Generating Station	8
▪ Charlot River Generating Station	10
Subtotal	23
TOTAL	847

[1] Based on 1998 ratings/2000 ratings total is 853.

These generating stations, with the exception of Coteau Creek at the outlet of Lake Diefenbaker, are essentially run of the river plants with little reservoir storage capacity.

The energy generating capability of these stations is stream flow dependent and as such, subject to highs and lows. The following table illustrates the range of available hydro-electric energy:

Table 3.6: SaskPower Hydraulic Energy Generated (GWhr)

	1984	1985	1988	1989	1996	2001 (as per Rate Proposal)	2001 (as per Nov 1/01)	2002 (as per Nov. 1/01)	2003 (median)
Saskatchewan River									
• EB Campbell Generating Station	627	717	603	797	1,180	586	556	676	956
• Nipawin Generating Station	NIL[1]	91	654	859	1,274	667	636	782	1,020
• Coteau Creek Generating Station	301	363	336	404	1,085	345	331	457	601
Subtotal	**928**	**1,170**	**1,594**	**2,060**	**3,539**	**1,598**	**1,523**	**1,915**	**2,577**
Churchill River									
• Island Falls Generating Station	766	762	735	719	688	748	747	872	852
Athabasca									
• Wellington Generating Station	NIL[1]	NIL[1]	6	17	38	NA	33	34	NA
• Waterloo Generating Station	NIL[1]	NIL[1]	4	25	52	NA	44	39	NA
• Charlot River Generating Station	NIL[1]	NIL[1]	5	21	80	NA	65	46	NA
Subtotal	**NIL**	**NIL**	**15**	**63**	**170**	**138**	**142**	**119**	**121**
TOTAL	**1,694**	**1,933**	**2,343**	**2,841**	**4,397[2]**	**2,484**	**2,412**	**2,907[3]**	**3,550**

Notes:

1. Not in service.
2. Maximum hydraulic energy generated (theoretically exceeded four times since 1969).
3. The SaskPower 2002 Business Plan was 3,297 GWhr.

As of the time of this review, SaskPower was facing a challenge in terms of available water flows. The recent dry conditions on the prairies have resulted in reduced water flows and therefore a decrease in capacity to generate hydraulic power. Flows in the Saskatchewan and Churchill River Basins are expected to be well below normal into the spring of 2002. Hydraulic power generation during years of median flows is estimated at 3,550 GWhr. Total hydraulic power generation for 2001 is estimated at 2,412 GWhr based on November 1 updates submitted to the review team. The 2002 Business Plan anticipates hydraulic power generation for 2002 at 3,297 GWhr. (This differs from the November 1, 2001 update.) This increases to 3,550 GWhr in 2003 and remains in the order of 3,500 GWhr through to 2006. Given the continued challenge of available water, actual hydraulic production in 2002 may be as little as 2,907 GWhr according to SaskPower officials.

Predicting water flows and availability is a difficult task. Water flows can quickly rebound under the right conditions, such as a heavy winter snowfall and wet spring. History has proven that water conditions do rebound quickly. Under median and above flow conditions, SaskPower has the capacity to generate 3,550 GWhr of cheap electricity.

3.3.2.2. Hydro Generation Summary and Analysis

The Saskatchewan and Churchill River watersheds are experiencing below normal water levels resulting in reduced hydraulic generating capacity for SaskPower. The outlook for 2002 continues to be pessimistic in terms of water supply. Long-term predictions of water supplies and stream flows is an inexact science. History has proven itself that stream flows can recover very quickly given the right circumstances. Therefore, forecasted median flows and resulting hydraulic power generation for the Years 2003 to 2006 may be overly pessimistic. Obviously, the more available hydraulic power, the cheaper the cost of electrical energy production.

3.3.3. Gas/Turbine Generation

3.3.3.1. General

SaskPower currently produces approximately 18% of its energy needs from natural gas-fired plants. These plants are outlined in Table 3.7 below.

Table 3.7: SaskPower Gas/Turbine Generating Capability

	Net Maximum Capacity
• Queen Elizabeth (nine units)	386 MW (since 1999)
• Landis (one unit)	80 MW
• Meadow Lake (one unit)	43 MW
• Success (three units)	30 MW
Total	**539 MW**

As a group, they contribute approximately 18% of SaskPower's total demand capacity capability and because of high variable fuel costs, are used primarily to meet peak load requirements or to meet emergency supply needs.

As peaking plants, the energy generated by these natural gas turbines has been and will continue to be highly variable. The following table illustrates the recent supply history and probable future use.

Table 3.8: SaskPower Gas/Turbine Energy Generated (GWhr)

	Actual								Estimated				
	1995	1996	1997	1998	1999	2000	2001 Budget	2001 September	2002	2003	2004	2005	2006
Queen Elizabeth	--	--	--	--									
Landis	35	49	80	131									
Meadow Lake	84	98	89	205									
Success	Neg.	1	4	12									
Totals	**119**	**148**	**173**	**348**	**995**	**924**	**746**	**990**	**1563**	**1265**	**1368**	**1827**	**1723**

3.3.3.2. Gas Turbine Generation Summary and Analysis

SaskPower's long-term strategy for additional energy production focuses on gas-fired turbine generation. This can readily be seen by the anticipated gas turbine energy production for 2002 increasing by 573 GWhr or 58% from 990 GWhr to 1,563 GWhr. The long-term trend sees a continued reliance on gas for energy production peaking at upwards of 1,827 GWhr in 2005.

The reliance on gas-fired energy generation sources puts SaskPower at some degree of financial risk, given the volatility of natural gas prices as witnessed in the last year. Natural gas purchase hedging practices by SaskPower have resulted in a more stable price guarantee for large volume purchases. The recent economic slowdown and warmer than usual weather patterns have brought the forward price of natural gas down substantially from levels seen in the previous year. At the time of preparation of this review, the December 2001 to October 2002 forward price for natural gas was in the order of $3.93 per gigajoule. SaskPower has currently hedged approximately 55% of their 2002 gas purchases at a price of approximately $4.61 per gigajoule. Possible future savings in gas purchases should be realized in 2002 for remaining gas purchases required.

3.3.4. Energy Imports and Exports

3.3.4.1. General

SaskPower's transmission grid system has three interconnections to neighbouring utility systems, as shown on Figure 1. Because of a variety of constraints (energy availability, trip line transmission capacity, and emergency reserves), the actual ability to bring power into Saskatchewan is considerably less. The following table provides a simplistic summary of what is currently achievable under normal circumstances.

Table 3.9: SaskPower Import/Export Potential

	On-Peak Availability (MW)	Off-Peak Capability (MW)
From MAPP (USA and Manitoba)	187.5 (winter) 262.5 (summer)	225 (winter) 225 (summer)
From PPA (Power Alberta)	75 (winter) 75 (summer)	75 (winter) 75 (summer)
Combined Totals	**262.5 (winter)**	**300 (winter)**
	337.5 (summer)	**300 (summer)**

The foregoing would suggest that SaskPower could theoretically import a maximum of 2,700 GWhr/year (assuming there were no conflicting exports).

The actual historical and forecasted power imports are presented in the following table:

Table 3.10: SaskPower Imported Energy Used and Costs

	Actual						Estimated	Forecasted				
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
PPA	–	–	–	–	–	–	–	–	–			
Basin	–	–	–	–	–	–	–	–	–			
Manitoba	–	–	–	–	–	–	–	–	–			
GWhr	**291**	**741**	**982**	**1,536**	**1,910**	**1,940**	**2,120**	**906**	**618**	**634**	**786**	**903**
Cost ($ Millions)		**12**	**21**	**44**	**51**	**69**	**89**	**54**	**30**	**27**	**36**	**43**

In the past three years, SaskPower has been importing 70 to 75% of the theoretically possible energy. Forecasts which suggest that imports will decline to the 600 to 800 GWhr range seem somewhat pessimistic (e.g., the 2001 budget import forecast was exceeded by 120%).

The same interconnections to external grids that allow import of energy also allow for export of energy when market prices rise. SaskPower has been able to export generally increasing amounts of energy

over the last five years. The following table illustrates this and provides the forecasts for future exports.

Table 3.11: SaskPower Exported Energy Generated (GWhr)

	1996	1997	1998	1999	2000	2001 Budget	2001 Estimated	2002 Forecasted	2003 Forecasted	2004	2005	2006
GWhr	467	369	618	801	1143	1176	964	951	1040	936	915	840
Revenue ($ M)					**137**	**97**	**112**	**95**	**88**	**-75**	**67**	**56**

It should be noted that the combined total of import and export reached 3,100± GWhr in 2001. Forecasts for 2002 and 2003 show 1,857 and 1,658 GWhr, respectively in combined import and export. This decline may be overly pessimistic.

3.3.4.2. Energy Imports and Export Summary and Analysis

SaskPower's ability to import and export power is constrained by system limitations and both seasonal and daily on-peak and off-peak timing restrictions. In general, however, SaskPower is expecting imported energy to drop in 2002 due to anticipated increases in import energy costs. 2002 imported energy costs are expected to rise from approximately ¢3.9/KWhr in 2001 to $6.0/KWhr in 2002. This unit cost for import energy is anticipated to decrease to ¢4.8/KWhr in 2006.

SaskPower also anticipates export revenues to decline in 2002 due to an anticipated decrease in demand and unit price for energy. Export revenues are expected to decline from $109 M in 2001 to $95 M in 2002. This translates into an average export price of ¢10/KWhr in 2002. This declines to ¢6.7/KWhr in 2006.

This creates somewhat of a paradox since import costs per KWhr are expected to rise while export costs per KWhr are expected to decline. It is considered very unlikely import costs will approach ¢6/KWhr in 2002; especially if imports are purchased during off-peak hours. This would amount to a 70% increase in KWhr costs from a 2000 average price of ¢3.5/KWhr. Average import costs for 2001 to date have been in the order of ¢4.2/KWhr.

Should SaskPower consider the purchase of import power during off-peak times, import power costs of ¢3.5/KWhr to ¢4.5/KWhr should be readily achievable. Recent off-peak import power costs from Manitoba Hydro (November 2001) varied from ¢2.06 to ¢2.54/KWhr. Thus, import costs may compare favorably with local gas generation. For 2001, gas generation costs averaged ¢13/KWhr and ¢6.25/KWhr from co-generation facilities. SaskPower has forecasted 2002 gas generation costs at ¢5.9/KWhr and ¢4.9 to ¢6.8/KWhr from co-generation facilities, assuming gas prices decline somewhat in 2002.

This analysis therefore suggests that the purchase of import power may be the more economical option than the operation of gas generating facilities. This would be especially applicable if import power could be purchased during off-peak time periods.

3.3.5. Meridian and Cory Co-Generation Plants

The Meridian co-generation plant at Lloydminster came on-line in 2000. It is natural gas-fired with an average capacity of 210 MW

With no major overhaul anticipated for at least six years, the full plant capacity should be available for the next six years.

The Cory Co-generation Plant is a 228 MW natural gas-fired co-generation/combined cycle plant scheduled to come on-line after November 1, 2002. SaskPower's initial commitment is to purchase 80 MW of non-dispatchable take or pay capacity and energy for the entire year. The remaining capacity can be purchased by SaskPower at its discretion (in August of each year, the entire plant capacity is available on a dispatchable basis). There has been some indication in this review that SaskPower's obligations may be to purchase most of the dispatchable power.

3.3.6. Wind Generating Facilities

There are two wind generating facilities in SaskPower's system. These are:

- Sunbridge - Seventeen wind turbine towers (coming on stream between July 2001 and December 2001), with an initial capability of 2 MW and a total capability of 11.2 MW,

- SaskPower - Eight wind turbine towers (August 2002 in service) capable of producing 5.3 MW with an assumed energy production of 20 GWhr (43% capacity factor).

These wind generating facilities can be used to complement gas generation, when wind conditions permit. They are not firm energy generators.

3.3.7. Transmission and Distribution

Figure 1 illustrates the major transmission networks for Saskatchewan. These facilities have been progressively improved and expanded over the last five years. Table 3.12 illustrates the growth in transmission and distribution facilities from 1995 to 2000.

Table 3.12: Growth in T & D Facilities from 1995 to 2000

Component/km		1995	2000	% Increase
230 KV		3,457	3,684	6.6%
138 KV		4,116	4,327	5.1%
115 KV		400	400	0
110 KV		190	190	0
72 KV		4,382	4,386	Neg.
72 KV[1]		7	7	0
25 KV		20,914	22,799	9.0
25 KV[1]		420	709	69
14 KV		72,821	72,437	-0.5
14 KV[1]		41,997	42,914	2.2

[1] Underground km

SaskPower appears to have been diligent in keeping transmission capabilities in step with increased generation and load. Presumably, additional transmission requirements will track new generation plants such as the Cory co-generation plant.

3.3.8. Energy Conservation

In May 2001, the Premier of Saskatchewan appointed Peter Prebble (MLA for Saskatoon-Greystone) to coordinate the development of a Saskatchewan GreenPrint for Energy Conservation (provincial conservation strategy). In conjunction with this initiative, Mr. Prebble is working with a government-wide committee to identify conservation program options. These options will be evaluated, interest groups consulted, and a GreenPrint program menu will be presented to cabinet in the September to October period. Some of the organizations contributing to the planning effort include: Saskatchewan Energy and Mines (SEM), SaskPower, SaskEnergy, SaskHousing, SERM, Saskatchewan Research Council, etc. The government has also engaged a consultant from the Pembina Institute, Roger Peters, to work with Mr. Prebble in this undertaking.

Because SaskPower and SaskEnergy are the primary energy providers of electricity and natural gas to the people of Saskatchewan, these organizations have a significant interest in the outcome of this planning process. Existing SaskPower/SaskEnergy programs (like the PowerCheck on-line energy audit, the Energy Performance Contracting (EPC) program, the SaskEnergy high efficiency furnace load programs are being integrated into the GreenPrint plans. As well, other new programs are being considered.

4. SYSTEM OPERATIONAL COSTS

4.1. Energy Sales

SaskPower has seen a general increase in annual energy sales (41% increase since 1991). Only in 2001 does it appear that there was some slippage. Sales revenue on the other hand has increased every year (69% increase since 1991). However, as illustrated in Table 4.1, the average price during this period has increased by 20%, suggesting increased sales revenue is being driven more by increasing energy volume than by unit price gains.

Table 4.1: SaskPower Energy Sales Revenue from Annual Reports and Business Plan

Year	Energy Sales (GWhr)	Revenue ($ Million)	Average Sales Value (¢/KWhr)
1991	12,031	667	5.54
1992	12,657	712	5.63
1993	13,748	790	6.06
1994	13,820	837	6.06
1995	14,383	861	5.99
1996	15,064	886	5.88
1997	15,608	917	5.88
1998	16,187	958	5.92
1999	16,210	977	6.03
2000	17,049	1,080	6.33
2001*	16,981	1,124	6.62
2002*	17,505	1,148	6.78
2003*	18,086	1,240	6.86

*October 26, 2002 Business Plan

4.2. Fuel and Purchased Power Costs

Table 4.2 (SaskPower Summary of Power Supply Costs) attempts to illustrate the relationships (historical and forecast) that have determined the choice of energy sources.

From careful analysis of this table, a number of observations and trends are apparent:

- Hydro is the preferred supply source at costs of less than ¢0.3/KWhr. It has been and will continue to be the energy choice to the maximum extent available. Unusually low stream flows in the 2000 to 2001 period reduced the hydro percentage of total energy provided from approximately 20% to 16%.

Table 4.2: SaskPower Summary of Power Supply Costs

	1995*	1996*	1997*	1998*	1999*	2000*	Sept. 2001 Update**	2002***	2003***	2004***	2005***	2006***
GWhr Export		464	369	618	801	1,143	964	951	1,040	936	915	840
$ M Revenue		9	8	21	42	128	109.5	95.3	87.5	75.5	67.8	56.4
c/KWhr		1.93	2.17	3.40	5.24	11.2	11.3	10.02	8.4	8.07	7.41	6.7
GWhr Import	291	741	982	1,536	1,811	1,995	2,120	906	618	634	786	903
$ M Cost					50.5	68.8	83.8	54.1	30.0	27.5	36.0	43.4
c/KWhr					2.64	3.44	3.95	6.0	4.85	4.33	4.58	4.81
Hydro GWhr	4,137	4,396	4,005	3,668	3,668	3,046	2,424	3,297	3,550	3,562	3,549	3,549
$ M Cost					9.3	7.9	6.6	8.9	9.8	10.0	10.2	10.4
c/KWhr					0.25	0.25	0.28	0.28	0.28	0.28	0.28	0.28
Coal GWhr	12,669	12,565	13,251	13,584	11,568	11,436	11,711	11,789	11,448	11,613	11,450	11,584
$ M Cost					144.6	167	182.7	185	185	188	174	175
c/KWhr					1.25	1.42	1.56	1.6	1.6	1.6	1.5	1.5
Gas GWhr	119	148	173	348	995	924	990	1,563	1,265	1,368	1,827	1,723
$ M Cost					42.1	66.8	116.6	92.1	77.5	80.2	102.9	9.25
c/KWhr					4.7	7.2	11.8	6	6	6	5.5	5.5
Meriden GWhr												
$ M Cost												
c/KWhr												
Cory GWhr												
$ M Cost												
c/KWhr												
Wind GWhr												
$ M Cost												
c/KWhr												
Total Sales GWhr (excludes loss)	**14,400**	**15,000**	**15,600**	**16,200**	**16,200**	**17,050**	**16,981**	**17,509**	**18,090**	**18,449**	**18,753**	**19,051**
$ M Supply Cost					**256**	**387**	**477**	**439**	**474**	**477**	**490**	**502**
c/KWhr					**1.6**	**2.3**	**2.8**	**2.5**	**2.6**	**2.6**	**2.6**	**2.6**

* Annual Reports ** From SaskPower Third Quarter Report *** SaskPower 2002 Business Plan

- Coal accounted for 80% of the energy supply until 1998, after which the conversion of the Queen Elizabeth generating station to natural gas, reduced the coal share of energy supplied to approximately 67%. Coal costs have risen from ¢1.25/KWhr in 1999 to ¢1.6/KWhr by 2002. However, coal continues to cost ¢2.5 to ¢3.0/KWhr less than gas-supplied energy sources. Environmental liabilities associated with coal-fired generation are continuing to grow and may force progressive movement away from coal generation. or costly environmental control equipment.

- Imported energy has played an increasing role in SaskPower's energy supply reaching a high of 2,120 GWhr or 12% of total energy sold. The Business Plan forecasts suggest that this import level will be reduced to 600 to 800 GWhr in future years as a result of anticipated higher market prices for imported energy. A similar forecast was made for 2001, but proved to be incorrect as natural gas prices rose dramatically while import prices did not rise to the extent anticipated. Import energy costs for 2001 were approximately ¢3.95/KWhr.

- The Cory Co-generation Station is contracted to supply 80 MW on a firm basis to SaskPower. Additionally, there are up to 148 MW available on an as-required/dispatchable basis.

- Export sales prices have increased dramatically to ¢11.2/KWhr in 2000 and ¢11.3/KWhr in 2001 from ¢5.24/KWhr in 1999 and ¢3.40/KWhr in 1998.

4.3. System Operations Summary and Analysis

The following items represent an analysis of system operational practices and possible savings.

- SaskPower's assumptions on future energy generation appear to be predicated on meeting its net income targets in a period when climatic conditions and the natural gas market have created an extremely unfavorable financial condition in 2001 and are likely to do so again in 2002. Unless domestic rates are increased, they expect the same results in 2002. In addition, growth in energy demand is projected at 2.5% to 3% for 2002. Recent events and the declining economy would suggest that SaskPower's load forecasts are overly optimistic. Contrary to expectations that 2001 would see an energy growth of 1.3%, there was little or no growth. Forecasts of a 2.5% to 3% energy growth for 2002 are very optimistic. A growth rate of 1% to 1.5% is more likely. This amounts to approximately 250 GWhr in increased demand rather than 528 GWhr in estimated demands. Savings in electrical generation requirements would therefore be in the order of 250 to 280 GWhr. If we assume this energy savings of say 250 GWhr was produced by gas generation, net savings would be 250 GWhr x (¢6/KWhr for gas generation – the average sale price to the non-residential component in the SaskPower rate table). This amounts to 250 GWhr x (¢6/KWhr - ¢3.7/KWhr) = $5.75 M or approximately $6.0 M.

- The Proposal assumes an anticipated inability to continue to purchase import power at attractive rates (¢3.5 to ¢4.0/KWhr) in sufficient quantities (2000 ± GWhr in 2000 and 2001) to avoid expenditures in gas turbine generation (¢6/KWhr). The experience in 2001 was that SaskPower could buy significant (1000± GWhr) additional power from Manitoba Hydro at lower than budgeted prices. This scenario, if repeated in 2002, would have potential savings of $10 to $20 M (500 to 1,000 GWhr of imported power @ ¢4/KWhr would replace gas turbine generation at ¢6/KWhr). Off-peak surplus energy rates in Manitoba have remained at or below ¢2.5/KWhr during 2001.

  If this import price and availability experience in 2001 is projected into the 2002 and 2003 period, SaskPower could reasonably expect to import an additional 500 to 1,000 GWhr of electricity as a substitute for natural gas-fired turbine energy or SPI's Cory Co-generation dispatchable (or non-firm) energy. Average imported energy prices paid by SaskPower have been increasing over the last three years (from ¢2.64/KWhr in 1999 to ¢3.95/KWhr in 2001). This latter projected value is 0.35¢ lower than the ¢4.30/KWhr use in the 2001 budget. As such, it is not unreasonable to suggest that import costs may be significantly lower than the ¢6.00/KWhr proposed for 2002 in the current SaskPower Business Plan.

- SaskPower anticipates a 10% to 20% below median (normal) forecast hydro generation output, based on a partial recovery from the 30 to 32% below medium hydro energy available in 2001.

  Historically, following drought scenarios, SaskPower's hydro production has returned after two years. An unlikely full recovery to the median energy level would have potential savings of $14 M (approximately 250 GWhr @ ¢6/KWhr for gas minus ¢0.30/KWhr for hydro).

  This saving is a low probability. It can however be rationalized to some extent as it is likely that 50% of future years will be above median and these could theoretically occur within the next five years. SaskPower estimates a three in four chance that their 2002 Business Plan forecast for hydraulic power generation will not be realized. Recent forecasts have budgeted approximately 2,900 GWhr in hydraulic generating capability for 2002.

- Cory energy, over and above the committed firm purchase, could be attractive during peak demand periods.

  Environmental benefits associated with co-generation will continue (in the long-term) to justify Cory production relative to coal energy. High export prices (on-peak) could also encourage Cory production.

- SaskPower currently hedges natural gas purchases to avoid substantial swings in natural gas costs. For 2002, SaskPower estimates a natural gas requirement in the order of 31,300,000 GJ. SaskPower has already hedged in the order of 18,000,000 GJ at a price of $4.61 per GJ. The remaining 13,300,000 GJ will be purchased on the open market. In SaskPower's Business Plan and Rate Proposal, they have assumed a weighted average price for gas of $5.00/GJ, including transportation costs. The recent December to October 2, 2001 forward averaging price for natural gas is now approximately $3.93/GJ. These prices are anticipated to fall even further. If we assume a weighted average price of $4.25/GJ rather than $5.00/GJ, as a result of lower gas costs, a 15% saving in gas purchase price may be realized. This would amount to gas prices in the order of ¢5/KWhr instead of the anticipated ¢6/KWhr. As of November 19, 2001, spot market gas prices were in the order of $2.96/GJ.

5. CAPITAL COSTS, OPERATING, MAINTENANCE, ADMINISTRATION, PLUS OTHER FINANCIAL ISSUES

5.1. Capital Cost Programs

SaskPower has over the last seven years been spending $160 M (on average) per year on Capital Works such as customer access, distribution system upgrades, new transmission facilities, and environmental improvements to generation plants. These actual and anticipated expenditures are outlined in Table 5.1.

Table 5.1: SaskPower Capital Expenditures

	Actual					Budget	Forecast					
	1996	1997	1998	1999	2000	2001	2001	2002	2003	2004	2005	2006
Capital Works ($ M)	117	160	137	185	212	365	302	335	346	354	416	492

These cash requirements include capital investments by SPI.

While the actual dollar investment in capital varies from year to year, the capital expenditures in 2001 were allocated as follows:

	Budget ($ M)	Revised Forecast ($ M)
Corporate Services (Financial/Regulatory/Information Technology)	21.5	12.7
Customer Services	4.7	4.7
Existing Power Production (including Carbon Office)	70.4	75.4
New Generation (Queen Elizabeth and Wind)	103.1	90.3
Transmission and Distribution (including Customer Connects @ $38.2 M and $43.2 M)	115.5	108.0
SPI (Cory Co-generation)	50.0	10.7
Total	**365.2**	**301.7**

Available information does not permit a definitive allocation of revised forecast 2001 generation system upgrade costs to coal, hydro, gas turbine, or co-generation; however, it is suggested that these funds were allocated on the following basis:

- Coal – 67%
- Hydro – 0%.

- Gas Turbine – 30%.
- Co-generation – 3%

Environmental costs (site remediation/air quality improvements) are included in these categories.

SaskPower, with its broad scope of power supply sources, is faced with difficult choices when it comes to new plant investments and also facility decommissioning. SaskPower's current strategy appears to be focussed on:

- Add co-generation facilities while decommissioning older gas turbines.
- Upgrade coal generation plants progressively to meet evolving environmental requirements.
- Enhance hydro production, if possible.
- Add wind power where appropriate.

There does not appear to be a plan to enhance import/export transmission capabilities at this time.

5.2. Operating/Maintenance/Administration

Table 5.2 highlights SaskPower's Operation, Maintenance, and Administration (OM&A) costs.

Table 5.2: SaskPower OM&A Costs

	Actual						Forecast				
	1996	1997	1998	1997	2000	2001 Budget	2002	2003	2004	2005	2006
Cost ($ M)	197	214	238	281	264	276	290	312	322	352	396

SaskPower's operating, maintenance, and administration costs represent 25 to 40% of total operating costs and expenses. On a unit cost basis, these costs have increased from ¢1.3/KWhr in 1996 to ¢1.55/KWhr in 2001 (20% increase over six years compared to an inflation rate of 10%).

In other jurisdictions (e.g., Manitoba Hydro), the OM&A costs account for 20 to 25% of total operating costs/expenses. At Manitoba Hydro, these unit OM&A costs rose from ¢0.79/KWhr in 1996 to ¢0.83/KWhr in 2001 (a 5% increase over six years).

In terms of staff resource efficiencies, SaskPower has generated between 6 and 8 GWhr for each equivalent full-time employee since 1995. In 1995, SaskPower generated 6.7 GWhr/employee. This productivity rose to 7.50 GWhr per employee in 1998 and has since declined to 5.6 GWhr/employee in 2001. Ideally, most utilities strive to achieve a steady increase in productivity. SaskPower is budgeting for an additional 99 full-time equivalent positions in 2002. The resulting increase in employee growth seems excessive in comparison to the load growth. Based on this review, it would seem SaskPower was more efficient in prior years in terms of GWhr generated per employee.

Comparison to industry standards such as the CAE-COPE rating system is difficult because of the considerable variation in the way that different utilities allocate costs.

Operation/maintenance and administration costs are generally allocated as follows at SaskPower:

- Generation - 44%.
- Transmission/Distribution - 25%.
- Customer Service - 10%.
- Corporate/etc. - 21%.

These appear to be reasonable with the possible exception of corporate elements.

5.3. Return on Equity

SaskPower's targeted Return on Equity of 10% may have been appropriate over the last ten years, when interest rates were in the 7.5 to 8% range. Even recognizing that most of the corporation's debt is long-term and subject to interest rates in the 8 to 10% range, it may be appropriate to consider lowering this target, given that new borrowing is achievable at much lower interest rates (e.g., 6%). The fact that the cost of borrowing money has decreased, consideration of a lower return on equity may be warranted.

5.4. SaskPower International

The establishment of SPI (then Commercial) was authorized by the SaskPower Board on December 15, 1993 and ratified by the Crown Investments Corporation Board on February 24, 1994. It was incorporated as a wholly owned subsidiary of SaskPower in September 1994 with a mandate to diversify and enhance SaskPower's revenue base, promote job creation and economic development of the Province, and to achieve a suitable return on invested capital. The declared strategy in SPI's original business plan to achieve those objectives was to market SaskPower's expertise to national and

international markets; to market and sell by-products and equipment that is surplus to the needs of the Corporation, and to pursue business opportunities that utilize SaskPower's core business knowledge and networks.

SPI, as a subsidiary of SaskPower, is aligned to contribute to SaskPower's vision of ***excelling in competitive energy markets.*** As such, SPI has been mandated to seek new sources of generation and new sources of corporate and business growth for SaskPower.

In response to this desire to grow the corporation, SPI continues to seek power project investments, including co-generation projects in Saskatchewan and beyond, in conjunction with knowledgeable partners.

SPI's investments outside of Saskatchewan will be targeted in the primary market (North America) with a focus on the region adjacent to the province, other parts of Canada, and subsequently in regions where the culture, language, and business practices are similar to our own.

SPI's primary goals are as follows:

- Market SaskPower's expertise to national and international markets.
- Sell flyash and other by-products.
- Invest in power projects where the Proposal of core skills of SaskPower can add value and where commercial and political risks are acceptable and manageable.

SPI, through a 50-50 joint venture with ATCO Power Canada Ltd. (ATCO), entered the construction phase of the Cory Co-generation Station in 2001.

Investments outside of Saskatchewan by SPI will be targeted in the primary market (North America) with a focus on the region adjacent to the province, other parts of Canada, and subsequently in regions where the culture, language, and business practices are similar to our own (secondary markets).

SPI has budgeted $250 M in equity over five years (to 2006) for such investments. This amounts to SaskPower's equity position in SPI. In addition, SPI has budgeted approximately $233 M in non-recourse financing over the same period.

SPI expects to incur losses of $1 to $2 M/year over the next three to four years.

As a result, SaskPower's net income will be reduced by approximately $4 to $5 M/year (SPI losses plus financing cost estimated at $30 M/year by 2006). These costs form part of the SaskPower revenue requirements to be covered by rate payers.

As SaskPower International grows, capital expenditures are expected to total approximately $483 M by 2006. This is a significant capital investment for a subsidiary company. Based on this review, it would appear that SPI projected revenues by 2006 would potentially not cover interest charges on capital expenditures (estimated to reach $28 to $30 M/year by 2006). This would seem to put the Saskatchewan rate payers at risk to cover the potential costs of SPI investments. As a result, it is suggested SaskPower seriously consider that SPI be treated as a fully cost accounted non-regulated company.

5.5. Depreciation

Depreciation expense is forecasted to increase by approximately $9.0 M over the 2001 forecast. Total depreciation for 2002 is estimated at $175.1 M. It was not within the scope of this review to undertake a depreciation study of SaskPower assets. The last depreciation study was conducted in 1996. SaskPower is scheduled to complete a new depreciation study by November of 2001. Without undertaking a detailed depreciation analysis or being able to review the newest depreciation study, this review is obviously limited as to the overall reasonableness of the depreciation value developed by SaskPower. The individual depreciation rates for assets, and overall depreciation value, appear to be reasonable.

5.6. Corporate Capital Tax

The Corporate Capital Tax is the tax on the Capital of SaskPower. This tax rate is set at 0.6% of "taxable paid-up capital." There is an exemption to Corporations with capital assets less than $10 M. SaskPower's Paid-up Capital (PUC) is made up by adding all balance sheet liabilities with adjustments for short-term accounts payable, and differences between amounts for book and income tax purposes.

SaskPower is allowed to deduct amounts, which represents capital in the form of shares or debt that have been loaned to other corporations or government, including accounts receivable in excess of 90 days.

In addition to the 0.6% regular rate, a resource corporation is subject to a resource surcharge. The surcharge is 3.6% of the corporation's value. However, a corporation is only required to pay the greater of the regular rate or resource surcharge. Corporations that have resource sales are required to pay tax at 3.6% of resource sales that take place in Saskatchewan.

Based on this formula and the legislated requirements, SaskPower's Corporate Capital Tax is estimated at $12.5 M for 2002.

5.7. Planned Maintenance

SaskPower's planned maintenance seems to logically follow their capital spending budget. The majority of SaskPower's maintenance activity is in the Power Production and transmission, as well as distribution business units. The allocation of maintenance expenditures seems reasonable based on this review.

5.8. Summary of Issues

SaskPower Capital Costs are largely focussed on new generation facilities as well as continued upgrading and customer connections to the transmission and distribution system. Future capital expenditure are largely focussed on new generation projects in 2003 to 2006. This also includes a commitment of $50.0 M/year by SaskPower as an equity position in SaskPower International (SPI) projects and an additional $50 M/year by SPI in non-resource financing. This amounts to a $76 M capital investment in 2002 and a budgeted $100 M/year investment commencing in 2003 (total investment to 2006 amounts to $483 M). This represents a significant commitment by SaskPower and SPI in capital expenditures.

SPI is currently functioning as a subsidiary to SaskPower. As such, return on equity flows ultimately to SaskPower. Likewise, SaskPower and their rate payers would seem to absorb the risks from investments made by SPI in new projects. It was not within the scope of this review to attempt to rationalize budgeted capital expenditures and investments by SPI and SaskPower's equity commitment in SPI. This review is designed to bring to the attention of the Panel the significant capital investments planned by SPI and SaskPower in as yet undefined projects. These projects are not necessarily based in Saskatchewan, but represent equity positions deemed to have potential benefits by SPI. As this is a significant departure in investing in more traditional SaskPower-based activities, SaskPower should consider SPI investments and financing as an independent, non-regulated, and fully cost-accounted arm of SaskPower.

Depreciation, corporate capital tax, and planned maintenance activities seem reasonable based on this review.

6. REVENUE REQUIREMENTS

6.1. General

SaskPower has identified total revenue requirements of:

- $1,129 M in 2001, increase of 0.2% over 2000 actual of $1,100 M.
- $1,203 M in 2002, increase of 2.6% over 2001.
- $1,260 M in 2003, increase of 4.7% over 2002.
- $1,283 M in 2004, increase of 1.8% over 2003.
- $1,313 M in 2005, increase of 2.3% over 2004.
- $1,337 M in 2006, increase of 1.8% over 2005.

These revenue requirements are based on:

- Load growth estimates of 0.4% in 2001, 3.1% in 2002, 3.3% in 2003, and 2.0% in 2004. These additional load growth demands must be largely fuelled by natural gas generation, with estimated fuel costs in the order of ¢6/KWhr.

6.2. Summary

- For 2002, the estimated increased energy requirement of 550± GWhr will result in a net income reduction of $13 M (e.g., 550 GWhr @ ¢6.0 – ¢3.7/KWhr of cost-revenue shortfall). **A less optimistic load growth forecast of approximately 1.0% could reduce the negative impact on net income by $8 to $10 M.**

- Lower hydro production – SaskPower has assumed hydro production of 3,297 GWhr in 2002. Hydro production rates are estimated in the order of 2,907 GWhr based on November 1, 2001 updates. The difference of approximately 250 GWhr must be made up by either gas generation or imported energy. The increase in revenue requirements due to gas generation is 250 GWhr x (¢6/KWhr - ¢0.3/KWhr) = $14 M. If imported energy was used, the increased revenue requirement would be 250 GWhr x (¢4 KWhr - ¢0.3 KWhr) or $9 M. A more favourable hydraulic outlook approaching median flows resulting in 3,550 GWhr could provide a comparable saving in the order of $14 M.

- Higher coal costs due to royalty increases and price escalation are expected to increase the unit cost of thermal energy by ¢0.2/KWhr. At an average energy capability of 11,500 GWhr, this translates into a net income reduction of $23 M.

- Higher natural gas costs were a very significant factor in 2000 and 2001 when average unit costs were 7¢ and ¢11/KWhr. The forecast for 2002 and on onward is at or below ¢6/KWhr. As such, there is little direct impact on future net income, even though SaskPower was impacted substantially during the past two years (e.g., as much as $12 M in 2000 and $50 M in 2001). **If supply costs for natural gas were to drop below current prices to ¢5/KWhr, there would be a positive impact on net income of $15 M.**

- A small decline in the export market for SaskPower's surplus power is forecasted for 2002 relative to 2001. This is expected to result in about a 10 to 15% reduction in export revenue (e.g., $14 M) largely as a result of lower unit market prices (10¢/KWhr down from ¢11.3/KWhr). Further similar reductions in future years are forecasted.

- Higher import prices and lower import availability are forecasted for power supply. Average import prices are expected to rise to ¢6/KWhr in 2002 (from ¢3.95/KWhr in 2001), then drop to ¢5/KWhr in 2003. Import power is to drop to 50% of average for last three years because at ¢6/KWhr, it does not really compete with gas generation. The ¢2/KWhr unit price increase raises revenue requirements by $18 M. **If on the other hand average import prices remain at 4¢, imported energy might rise by 500 to 1,000 GWhr to 2001 levels (displacing gas generation) and result in a rise in net income of $10 to $20 M.**

- Increasing operations, maintenance, and administration costs (salaries/inflation/etc.) are expected to rise from $262 M in 2000, $273 M in 2001, $284 M in 2002, $293 M in 2003, $301 M in 2004, $310 in 2005, and $320 M in 2006. This represents a 4% increase in 2002, with subsequent increases declining to 3%±. This cost will remain constant at ¢1.62/KWhr of energy sold. **A productivity gain of 2%, if achieved, would provide approximately $5 M in net income gain.**

- Increasing depreciation charges. Due to substantial capital works in 1999 and 2000, SaskPower's depreciation charges have increased by $9.0 M in 2002. Some of this relates to capitalized interest charges during construction, but is first being paid in the upcoming year. **These charges essentially flow out of past year's commitments and therefore cannot be adjusted in the short-term. In the long-term, the currently forecasted capital works may require scrutiny, because these will eventually lead to requests for rate increases.**

- Increasing finance costs. SaskPower anticipates that because of previous debt reduction measures and low current interest rates, financing costs will be held constant or may be reduced. However, the recent and forecasted capital programs (particularly the SPI investments) will result in increasing debt levels in the short-term and, in the longer-term, increased interest payments. **Again, there is no opportunity for short-term adjustments to reduce revenue requirements. In the long-term, it is important to examine the level of capital expenditures/investment.**

- SPI's investment program has had only modest, if any, impacts to date on SaskPower's net income. However, the addition of $50 M/year over the next five years will progressively increase debt levels and financing charges. By 2006, SaskPower's revenue requirements to service this debt must rise by $28 to $30 M/year. **Given SaskPower's current situation, it may be appropriate to defer/extend this SPI investment process. A one-year delay would potentially reduce revenue requirements in 2002 by $1.5 M and by $3.0 M in 2003.**

- Return on Equity Issues. SaskPower has made a strong case for retaining the current Return on Equity target of 10%, even though current interest rates point to lower expectations in the years to come. The corporation operates in more volatile sections of the energy market than do BC Hydro, Manitoba, or Quebec Hydro, whose cost side is relatively stable. **In the last five years, SaskPower has achieved and exceeded its current return on equity target of 10%, four times (1996, 1997, 1998, and 2000). In the other two years (1999 and 2001), it has fallen short of target, quite substantially in 2001, primarily as a result of lower hydro generation capability leading to gas consumption at high unit costs and to increased imports/reduced exports. Over the six-year period, the average rate of return on equity was just under 10%.**

SaskPower's net income forecasts for the next five years appears to be premised on achieving an average of 9.8% return on equity. Toward this end, they have requested a 5.41% increase as of December 1, 2001 and suggest a further increase of 1.99% for 2003. In general, based on SaskPower's assumptions, the proposed revenue requirements appear appropriate.

However, based on revised assumptions indicated from the above analysis, the following scenarios outlining potential savings should be achievable:

Scenario 1:

- *1.5% Economic Growth*
- *906 GWhr of Imported Power*
- *Gas Purchase Savings*
- *Shortfall in Hydraulic Power Production is made up with Imports (approximately 3,297 GWhr – 2,907 GWhr = 390 GWhr)*

For this scenario, it is assumed the savings as a result of slower economic growth (of 250 GWhr) is accrued to gas generation resulting in approximately 1,300 GWhr of gas-generated power supply in 2002.

Savings from reduced economic growth	= 250 GWhr x (¢6/KWhr - ¢3.7/KWhr) = $5.75 M	say $6.0 M
Gas savings	= 1300 GWhr x (¢1/KWhr saving) =	13.0 M
Imported power savings	= 906 GWhr x (¢2/KWhr saving) =	18.0 M
Additional imported power costs for hydraulic energy shortfall	= 390 GWhr x (¢4/KWhr) =	-15.0 M
Total Savings		**$22 M**

Scenario 2: ***Same as Scenario 1, except imported energy is increased to approximately 1,400 GWhr to replace costlier gas generation.***

Savings from reduced economic growth	= 250 GWhr x (¢6/KWhr - ¢3.7/KWhr) = $5.75 M	say $6.0 M
Import 1,400 GWhr	= 1,400 GWhr x (¢2/KWhr saving) =	28.0 M
Gas savings	= 800 GWhr x (¢1/KWhr saving) =	8.0 M
Additional imported power costs for hydraulic energy shortfall	= 390 GWhr x (¢4/KWhr) =	-15.0 M
Total Savings		**$27 M**

Scenario 3: ***Same as previous scenario, except now SaskPower imports 1,900 GWhr.***

Savings from reduced economic growth	= 250 GWhr (¢6/KWhr - ¢3.7/KWhr) = $5.75 M	say $6.0 M
Import 1,900 GWhr	= 1,900 GWhr (¢2/KWhr saving) =	38.0 M
Gas savings	= 300 GWhr (¢1/KWhr saving) =	3.0 M
Hydraulic energy shortfall is made up by gas generation at ¢5/KWhr	= 390 GWhr (¢5/KWhr) =	-19.0 M
Total Savings		**$28 M**

The above scenarios illustrate potential savings of $22 M to $28 M based on:

- Lower economic growth.
- Greater emphasis on import power during off-peak times.
- Potential gas savings.
- Changes in system operation.
- Unfavorable hydro generation conditions.

In addition to the above three scenarios, the following additional savings could be accrued:

- Operation, Maintenance, and Administration – A productivity increase of 1% would result in a net savings of approximately $1.0 M.

- Timing of Capital Expenditures – A delay of expenditure in capital investments could result in a savings of $2.5 M.

- Actual financing charges related to new investments could be reduced by $1.5 M to reflect recent interest rate reductions.

From the foregoing, it appears that with the proposed rate scenarios, SaskPower's net revenues could increase by at least $27.0 M. Our recommendation would be to consider reducing the rate increase by a similar or lesser amount. A $20 M reduction would be readily achievable.

7. REVENUE TO REVENUE REQUIREMENT RATIOS

7.1. Impacts on Various Customer Classes

SaskPower has provided data on the revenue to revenue ratios for the various customer classes at existing rates and at the proposed new rates. The following table illustrates the wide range of individual customer impacts as defined in Appendix I of the Rate Proposal.

These rate changes were based on an overall approach stipulated by SaskPower, namely:

- Classes above 1.0 R/RR would stay the same or move to a lower RR.
- Classes below 1.0 R/RR would be increased on a levelized basis to minimize impacts and the manufacturing sector would be targeted for a larger increase in order to move it closer to target.
- No classes currently below 1.0 R/RR would be moved above unity.
- Increases would be limited to 10% above class average for any one customer.

Table 7.1: Year 2002 Rate Change & R./R.R. Ratios

Class of Service	Year 2002 R/RR Ratio (Existing Rates)	Year 2002 R/RR Ratio (Proposed Rates)	Proposed % Increase within Class	Probable Range of Increases % Within Class
Urban Residential	**0.97**	**0.98**	**7.1%**	**4.85 to 7.9**
Rate Code E01 – City	0.97			
Rate Code E02 – Town, Village, Urban Resort				
Rural Residential	**0.90**	**0.94**	**10.0%**	**7.97 to 19.79**
Rate Code E03 – Rural, Rural Resort	0.90			
Farms	**0.96**	**0.98**	**8.0%**	**2.14 to 17.49**
Rate Code E19 – Farm – SP Transformers	0.79			
Rate Code E34 – Farm	0.97			
Rate Code E41 – Interruptible (Mains)	0.97			
Rate Code E42 – Interruptible (Pivots)	0.79			
Small Comm. – Urban	**1.02**	**1.01**	**5.0%**	**-15.30 to 14.99**
Rate Code E75 – GSS – SP Transformers	1.02			
Rate Code E77 – GSS – Customer Transformers	1.02			
Rate Code E85 – CS/SP – SP Transformers	1.02			

Class of Service	Year 2002 R/RR Ratio (Existing Rates)	Year 2002 R/RR Ratio (Proposed Rates)	Proposed % Increase within Class	Probable Range of Increases % Within Class
Rate Code E87 – BS/SP – Customer Transformers	1.02			
Small Comm. – Rural	**0.95**	**0.97**	**8.0%**	**0.01 to 17.64**
Rate Code E76 – GSS – SP Transformers	0.95			
Rate Code E78 – GSS – Customer Transformers	0.95			
Rate Code E86 – GS/SP – SP Transformer	0.95			
Rate Code E88 – GS/SP – SP Transformer	0.95			
Gen. Service – Urban	**1.03**	**1.03**	**5.0%**	**-6.60 to 14.79**
Rate Code E05 – GSL – SP Transformers	1.03			
Rate Code E07 – GSL – Customer Transformer	1.04			
Rate Code E15 – GS – Other Unmetered	1.01			
Rate Code E16 – GS – Other – Power Supply Units	1.01			
Rate Code E17 – GS – Other Cable Television	1.01			
Rate Code E18 – GS – LS – SP Transformers	1.01			
Rate Code E95 – GS/LP – SP Transformers	1.03			
Rate Code E97 – GS/LP – Customer Transformer	1.04			
Gen. Service – Rural	**1.01**	**1.01**	**6.0%**	**-0.41 to 15.73**
Rate Code E06 – GSL – SP Transformers	1.03			
Rate Code E08 – GSL – Customer Transformer	0.98			
Rate Code E10 – GSL – Customer Transformer	0.94			
Rate Code E12 – GSL – Customer Transformer	0.97			
Rate Code E90 – GS/LP – Customer Transformer	0.94			
Rate Code E92 – GS/LP – Customer Transformer	0.97			
Rate Code E96 – GS/LP – SP Transformers	1.03			
Rate Code E98 – GS/LP – SP Transformers	0.98			
Manufacturing – Small	**0.82**	**0.86**	**12.0%**	**-7.08 to 21.99**
Rate Code E60 – MFP – Customer Transformer	1.08			
Rate Code E65 – MFP – SP Transformer	0.87			
Rate Code E66 – MFP – SP Transformer	0.80			
Rate Code E67 – MFP – Customer Transformer	0.83			
Rate Code E68 – MFP – Customer Transformer	0.64			
Rate Code E69 – MFP – Customer Transformer	No Customers			
Manufacturing – Large	**0.83**	**0.89**	**12.0**	**4.54 to 19.15**
Rate Code E62 – M/FP – 25 KV Customer Transformer	0.80			
Rate Code E63 – M/FP – 72 KV Customer Transformer	0.89			
Rate Code E64 – M/FP – 138 KV Customer Transformer	0.79			
Power – Published Rates	**1.04**	**1.03**	**4.0%**	**1.40 to 7.86**
Rate Code E22 – Power – 25 KV	1.00			
Rate Code E23 – Power – 72 KV	1.06			
Rate Code E24 – Power – 138 KV	1.06			
Rate Code E46 – Power – 230 KV	No Customers			
Oilfields	**1.13**	**1.11**	**4.0%**	**-1.67 to 13.96**
Rate Code E20 -	1.13			
Streetlights – S01 to S23	**1.12**	**1.11**	**4.0%**	**N/A**
Reseller	**0.95**	**1.00**	**10.0%**	**N/A**
Rate Code E32 – Swift Current – 72 KV	0.96			
Rate Code E33 – Swift Current and Saskatoon – 138 KV	0.95			

SaskPower's proposal will see a 5.4% increase overall for its full slate of customers. If the key account contract customers are excluded, the average increase for the balance of customers is 6.8%.

Based on the proposal, urban customers, not including Saskatoon and Swift Current, will see average rate class increases of 5% to 7%. Non-urban customers and Saskatoon/Swift Current will see rate increases that average 8% to 10% on a class basis. These changes reflect the fact that the R/RR for rural customers were in the 0.86 to 0.96 range. These values suggest that urban customers have, in the past few years, been paying at least their full share of costs, while rural customers have been paying less than their full share of costs.

Within the urban residential classes, proposed rate changes will result in individual customer rate increases between 5% and 7%. Such a narrow range is unusual when a rate rebalancing process is taking place. However, urban commercial will see rate changes between -15% and +15%; this extreme variation is also unusual and could be viewed as inappropriate.

Within the rural/manufacturing/industrial classes, proposed rate changes vary from 8% to 12% (class average). This is intended to move R/RR upward by 0.04 to 0.06 for these classes.

However, the variability of individual customer rate increase is much larger for rural and industrial than for the urban group. Some customers will experience rate increases as high as 22%, while others will see rate decreases of up to 7%. This broad variation in rate change could be considered excessive.

Overall, there appears to have been a general trend by SaskPower towards increasing the fixed cost portion of a customer's bill (e.g., basic monthly charge and/or demand charges), and reducing the customer's sensitivity to energy consumption. This, in conjunction with the historical significantly lower charges for second block energy, does not provide any great incentive for energy conservation.

Within the current rate Proposal process, there has been insufficient time and opportunity to fully address the specific goals, allocation methodology, and progressive results of the four-year rate rebalancing venture. It is suggested that SaskPower undertake a detailed Cost of Service Study well in advance of the next rate increase Proposal (which has been indicated for 2003). This would permit a proper vetting of the objectives/reasonableness of the rebalancing process.

8. RATE COMPARISONS

SaskPower rate structure as of July 2001, provided Saskatchewan consumers (e.g., Regina with power bills at the following percentages of other utilities (Appendix C of Rate Proposal).

Table 8.1: Typical Electricity Bill Comparisons

Service	Manitoba Hydro (Winnipeg)	City of Medicine Hat	ATCO (Alberta)	EpCor (Edmonton)	Enmax (Calgary)	BC Hydro
Residential	148%	120%	64%	109%	98%	147%
Small Commercial						
• Non-Manufacturing	124%	91%	54%	86%	83%	137%
• Manufacturing	117%	86%	52%	82%	79%	130%
Medium Commercial						
• Non-Manufacturing	130%	98%	53%	75%	75%	116%
• Manufacturing	121%	91%	49%	70%	70%	108%
Standard Commercial						
• Non-Manufacturing	147%	126%	N/A	N/A	N/A	151%
• Manufacturing	117%	83%	N/A	N/A	N/A	119%
Standard Grain Farm	131%	100%	97 – 116%	62 – 79%	N/A	144%
Large Grain Farm	120%	89%	73%	N/A	N/A	122%
75 KV Farm						
• Non-Manufacturing	139%	120%	N/A	N/A	N/A	130%
• Manufacturing	119%	103%	N/A	N/A	N/A	111%

Not surprising, SaskPower rates are not competitive with Manitoba or BC utilities. They are however marginally competitive with the City of Medicine Hat in most service classes. As such, the proposed rate may have some impact on export prospects. However, SaskPower enjoys a substantial rate advantage over ATCO and EpCor, which should allow for continued power export at least in the short-term.

Within Saskatchewan, some electricity consumers are likely to see the proposed rate increases as an increasing economic disadvantage to residing/operating businesses in the province. SaskPower is already viewed as a high-price provider of electricity. These rate changes, driven in part by SaskPower's increasing reliance on natural gas as the fuel for on-peak, as well as off-peak power, will stand to confirm this viewpoint.

9. SUMMARY AND CONCLUSIONS

9.1. Revenue Requirements

SaskPower's Rate Proposal of October 2001 has requested an average rate increase of 5.4% (6.8%, excluding contracts) commencing December 1, 2001 and running through the Year 2002. This increases translates into a revenue increase of $56 M for the Year 2002.

SaskPower has provided substantial documentation to support this revenue requirement. Specific elements that have been suggested as primary contributors to the requested amount are:

- Load growth of 3.1% in 2002, which when supplied by high price natural gas, could result in an increased cost/shortfall of $13 M.
- Lower hydro production than normal (median), which when offset by higher priced natural gas generation, could increase costs by $14 M.
- Higher coal costs due to royalty increases and price escalations could increase costs by $23 M.
- Higher natural gas costs in 2000 and 2001 probably cost SaskPower $12 M and $50 M, respectively. Current gas prices are to a large degree set for 2002, but with slumping prices in late 2001, it is difficult to translate this into an increased cost for 2002.
- Export electricity sales are expected to decline in quantity and unit price for 2002, with a potential 10% reduction in revenue of $10 M.
- Import electricity prices will rise for 2002 and use of import power will be reduced. The cost of natural gas-fired generation to compensate could be in the order of $18 M.
- Operating, maintenance, and administration costs are expected to rise by $13 M in 2002, but spread over a large energy load will mean the unit cost remains unchanged.
- Depreciation charges in 2002 will be up by $9 M.
- Financing charges in 2001 will remain constant for 2002.
- Losses/debt charges flowing from SaskPower International would add $1 M to $2 M to 2002 costs.

Assuming all of the above assumptions are valid, these items would theoretically add significantly to SaskPower's revenue requirements. However, they are not directly additive and could realistically equate to $40 to $60 M. As such, they appear to support the $56 M additional revenue requirement identified by SaskPower.

However, it is reasonable to re-examine some of the foregoing assumptions. Based on our review and consideration of recent economic circumstances, we are recommending the following alternative short-term scenarios be considered:

- ***Load Growth*** – Recent events and economic forecasts would suggest that SaskPower's 3.1% energy load growth in 2002 is too optimistic. An assumed growth rate of 1.0 to 1.5% would reduce the projected revenue requirement by $6 to $10 M.
- ***Hydro Power Availability*** – A more favourable outlook of normal flow conditions would reduce the revenue requirement by approximately $14 M. Conversely, a less favourable outlook could increase the requirement for gas-fired generation and associated cost increases of approximately $14 M.
- ***Higher Coal Costs*** – Because there are consequences of higher taxes and already negotiated price escalations, no change in additional revenue requirement is likely.
- ***Higher Natural Gas Costs*** – Recent declines in the price of natural gas would suggest that SaskPower's actual costs in 2002 could be as much as ¢1/KWhr lower than indicated in the Rate Proposal. This could equate to a reduction in revenue requirements of approximately $15 M, assuming the indicated gas generated energy is actually used.
- ***Export Electricity Costs*** – A more optimistic viewpoint would suggest that export prices will remain constant with continuing good sales assuming that Alberta's energy needs and current high prices will only drop gradually from their current high levels. This would suggest that an anticipated revenue drop of $15 M in 2002.
- ***Higher Import Prices/Lower Power Availability*** – The current economic situation suggests that a more optimistic view of potential import power may be warranted. SaskPower's interconnections to the US Basin and Manitoba do have significant capabilities for import of power at levels three times SaskPower's 2002 forecast. Prices in Manitoba for off-peak power have been running in the ¢2.5-¢3.0/KWhr range. This is significantly lower than the average import price paid by SaskPower in 2001 of ¢3.95/KWhr and considerably lower than the ¢6/KWhr forecast by SaskPower. This 2001 scenario suggests that SaskPower could reduce costs by at least $18 M in 2002 by increased focus on import power relative to natural gas generation.
- ***Increased Operation/Maintenance/Administration Costs*** - Past performance by SaskPower suggests that higher productivity is achievable. For 2002, with the recent introduction of Queen Elizabeth Gas Turbines, Meridian Co-generation, and Cory Co-generation, it is likely that short-term gains are possible.
- ***Increased Financing Costs*** – SaskPower's forecast of little or no increase in financing costs for the Year 2002 is probably appropriate. However, the longer-term implications of

investments in SPI or other generation facilities may see a significant increase in financing costs two to four years from now.

- *Depreciation* – Forecasts provided by SaskPower suggest that the depreciation expense will rise by $9.0 M in 2002, presumably reflecting the addition of the Cory facility. If the overall capital program, including SPI ventures taking place, the future depreciation charges will rise significantly.
- *SPI Ventures* – SaskPower forecasts suggest that capital investments inside Saskatchewan and elsewhere may add $483 M to the long-term debt by 2006. The result would be interest charges of $30 M/year at that time. This level of financing cost increase will be difficult to absorb if SaskPower's financial situation is below target in 2002.

This review examined a number of operational scenarios which demonstrated potential savings. These scenarios assumed a 1.5% economic growth rate, a shortfall in SaskPower's hydraulic power production of 390 GWhr due to lower water levels, and various increases in the amount of imported energy. Based on this analysis, savings of $27 M to $33 M could be achieved. Our recommendation would be to consider reducing the requested increase by a similar or lesser amount. A $20 M reduction from the requested $56 M should be readily achievable.

9.2. Revenue to Revenue Requirement Issues

It is apparent that SaskPower is faced with a serious problem, probably not of their making, in the area of revenue/cost relationships for different rate classes and subgroups. Rate balancing, as per their four-year program, is an essential operation.

However, this is complicated by the large discrepancy of R/RR within rate classes. In the absence of a detailed Cost of Service Study, it is not possible to suggest specific modifications to SaskPower's proposed rate schedule.

However, our view is that the proposed rate structure is attempting to move costs from a unit of energy basis to a front end/demand charge scenario. Consequently, high load factor customers will pay comparatively less than low load factor customers. It also benefits high energy users, particularly those using second block energy at significantly lower unit costs. Energy conservation does not appear to have a high priority.

The current review did not have the time frame required, sufficient detailed data, or rate history available to venture specific opinions on the reasonableness and fairness of the currently proposed

rebalancing exercise. It would require a much more detailed in-depth study outside of a rate review to adequately address these issues.

To arbitrarily place tighter constraints on the range of increase would not correct imbalances which currently exist, but rather perpetuate these.

9.3. Comparative Costs

SaskPower's proposed rate increases do not appear to significantly harm its position in the import-export market. They do however perpetuate the Province's image as being a high energy cost jurisdiction.

For the domestic customers, the rate increases are no doubt unwelcome for all rate classes. They will be particularly unwelcome for manufacturing and food process customers who must compete in the non-Saskatchewan market as goods and services providers.

9.4. Recommendations for Required Studies

SaskPower should carry out a detailed Cost-of-Service study, which examines the specific way in which SaskPower's cost allocation methodology is applied, the parameters and controls that are used, and the acceptable degree of rate rebalancing measures that should be implemented. This should be undertaken within the next six months in order to permit a Rate Panel Review well in advance of the next rate increase proposal.

SaskPower's soon to be completed Depreciation Study should be forwarded to the Rate Review Panel for its review as soon as possible and certainly no later than mid-summer 2002.

SaskPower should seriously examine its future business relationship with SaskPower International with a view to moving SaskPower International's financial consequences from the responsibility of the SaskPower rate payer. It would also be useful to reflect on the perceived issue of conflicting business interests of the two organizations in selecting power supply strategies.

APPENDIX A

LITERATURE CONSULTED

APPENDIX A

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